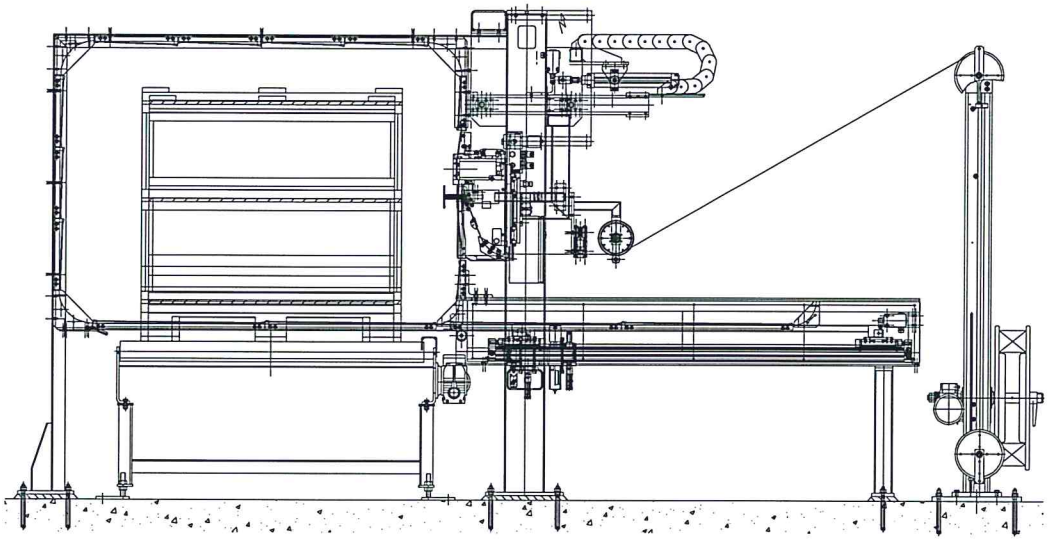
TITAN
Wir halten zusammen

Operating Instructions

Strapping Machine VS11-S
- Translation of Original -



Carefully retain these Operating Instructions! The operator of the machine is obliged to make these instructions freely accessible to operating and service personnel and explain them, if required. We expressly point out that the instructions on hazard and safety must be observed.

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1. General

1.1. Manufacturer

TITAN Umreifungstechnik GmbH & Co. KG
Berliner Straße 51- 55
58332 Schwelm / Germany

Phone +49 (0) 2336- 808 0
Fax +49 (0) 2336- 808 208

Customer Service:

Phone +49 (0) 2336- 808 275
Fax +49 (0) 2336- 808 322
Mail kundendienst@titan-schwelm.de

1.2. Type

Steel strapping machine VS11-L- S

Year of construction	2013
Customer:	Maschinenfabrik Möllers GmbH
	Sudhofer Weg 93-97
	59269 Beckum / Germany
Project-No.:	T13079
OC No.:	14134839
Item No.:	76902174014

The identification plate is located well-visible at the operator side of the machine frame.

1.3. Declaration of Incorporation

2. Safety instructions

The Operating Instructions are part of the specified product. Carefully retain these instructions and hand them over in case of change of owner or operator.

Safety and operating instructions are high-lighted by means of particular marks.



Warning!

Possible injury or damage to persons, machine or objects in case of improper use.

Instructions for hazard prevention.



Information!

Important information relating to machine operation or to the relevant part of the operating instructions.



Caution! Danger to life!

Danger to health and body by electric current.

The relevant instructions of subsuppliers which are annexed to these Operating Instructions must be carefully read and observed. Furthermore, these documents are provided on the subsupplier's websites or may be ordered from TITAN.

At any phase of operation life the machine may only be operated and handled by qualified personnel who has been thoroughly trained in the machine functions and risks in connection with the machine (training to be recorded). Personal protective equipment to be used at any time.

For safe operation of the machine the operator company must denominate a responsible supervisor.

Any personnel working on the machine must be instructed about these Operating Instructions, the local conditions as well as the safety precautions (instruction to be recorded).

2.1. Intended use

The TITAN strapping machine is designed for fully automatic strapping of the products specified under chapter 2.2. Furthermore the machine must only be operated with the strapping material specified under chapter 2.3. The strapping machine is intended for industrial use.

Under the terms of the machine directives (2006/42/EC) the strapping machine is partly completed machinery. That means, partly completed machinery is intended for incorporation in other machinery. The operator of the strapping machine must integrate it in the safety equipment of this machinery.

Any other application or handling of the machine does not comply with the intended use of the machine.

The strapping machine is designed and manufactured in accordance with the state of the art technology and the approved technical safety regulations. Nevertheless, in case the safety instructions are not observed or the machine is used in an unintended way, hazard of injury of persons or damage to the machine or machine parts exists.

Prior to machine commissioning the operator must assure himself of the good order and condition of the machine.

Trouble-free and safe operation of the strapping machine requires appropriate transport, storage and assembly as well as proper operation and maintenance. Damages and malfunctions, in particular those impairing the machine safety, must be remedied immediately.



Warning!

Hazard to the operator or third persons or danger and damage to the machine or machine parts when strapping packages with other than the specified dimensions, materials, temperatures or shapes.

Risk of injury of persons in case of inadmissible access to the machine.

Observe intended use of the machine!

The machine must be operated by adequately trained and qualified personnel only.

The machine must be secured by means of protective equipment, such as fences etc., in order to avoid access to the machine area during operation.



Information!

Modifications of the machine for use other than the intended use described in these Operating Instructions are prohibited.

Caution! Danger to life!

Electric control cabinets and electric installations

Keep the doors of the electric control cabinets safely locked. The keys must be in safekeeping of a responsible person (electrical engineering master technician).



Access to the control cabinets is only permitted for qualified personnel trained in handling of electrical installations and their hazards.

Any work at the control cabinets and the electrical installations may be carried out by qualified persons only.

Caution! Danger to life!

Operation of the control:

The control devices installed in this control unit are designed for maximum lifetime and comply with the VDE-regulations. Same applies to the cabling and further technical equipment of the machine.
Trouble-free operation of the control elements can be guaranteed under the following conditions only:



- **Ambient temperature at the control cabinet acc. to specification**
- **No undue contamination of the control unit.**

Caution! Danger to life!

Operating the machine with open control cabinet doors is not admissible!



Even with switched-off mains switch several terminals or devices may be live. (power supply, external supply!)

2.2. Specification of the product

Wooden boxes on pallets

Dimensions: Box type-1:

Length:	1.440 mm
Width:	1.102 mm
Height:	1.070 mm

Dimensions: Box type-2:

Length:	1.541 mm
Width:	1.165 mm
Height:	1.105 mm

Dimensions: Box type-3:

Length:	1.400 mm
Width:	1.150 mm
Height:	1.125 mm



2.3. Specification of the strapping material

Strap quality:	TITAN steel strap "Automatenband" for operation with automatic systems
Dimensions:	16 x 0,5 mm
Strap length per 100 kg	1600 m
Coil weight:	50 kg

Note:

The machines are supplied with each one strap coil for the first test run and commissioning.

2.4. Working environment of the operators

In normal mode the machine is operated from the control console outside the danger zone.

In case of trouble-shooting or for loading of consumables the operators must enter the danger zone. The machine must be set to a safe operation mode.



Warning!

Danger of cuts by the steel strap.

Danger when opening the strapping. Strap may jump-up when cutting it.

Personal protective equipment:

Safety shoes, safety glasses, safety gloves, helmet



Information!

The machine must be operated by adequately trained and qualified personnel only.

Training is adequate when:

- **the interrelations and sequences of the individual functions and movements are correctly understood,**
- **the initial (home) positions of all movements are known,**
- **the manual functions can be carried out in correct order,**
- **the interlocking conditions of all movements are understood,**
- **all fault- and malfunction messages are known.**



Information!

Noise pressure level approx. 85 dB(A) in normal mode.

3. Transport, erection, commissioning

3.1. Transport

The machine is partly disassembled for transport.

The machine is delivered with a film packaging and, if required, with supports for transport. This packaging must not be removed for temporary storage because in this case corrosion protection and stability can no longer be guaranteed.

Dimensions and weights of the individual machine components:

Designation	*Dimensions W x H x T in mm*	*Weight in kg*



Warning!

Danger of squeezing, shearing or crushing during unloading on site.

Danger by dropping objects during cross-transport on site.

Personal protective equipment:

Safety shoes, safety gloves, helmet



Information!

Hoisting and transport must be carried out with adequate hoisting or transporting devices only. Use attachment points or load suspension points of the machine components.



Information!

The commissioning of the partly completed machinery is prohibited until it has been ensured that the final machinery into which it is incorporated fulfils the requirements of the EC directive on machinery and until a Declaration of Conformity according to Annex II A has been issued.

3.2. Instructions for erection

Warning!



Danger of squeezing, shearing or crushing during assembly.

Noise emission when drilling in concrete.

Personal protective equipment:

Safety shoes, safety gloves, helmet, ear protection

Caution! Danger to life!



Danger of electric shock when cabling or connecting cables or cable connections.

Connection to the mains supply must not be made before completion of the electrical installation.

Caution! Danger to life!



Caution: Risk of death and injury!
Any work at live components must be carried out in accordance with the supplied documentation by qualified electrical engineering technicians only.

The machine must be connected in accordance with the supplied documentation by the a.m. qualified technicians only. The specifications and regulations of the local energy suppliers must be observed.



Information!

Erection and assembly of the TITAN strapping machine must only be carried out by trained personnel with professional training in mechanical or electrical engineering.



Information!

Prior to erection and assembly the relevant safety equipment, such as fences, fenders, railings and chains relating to machinery, pits, platforms, travel paths and walkways existing on site must be duly installed.

Erection and assembly of the machine must be carried out in accordance with the following drawings and diagrams:

Designation	***No. of document***
Layout drawing VS11-S	4549000758
Pneumatic diagram	4545000388
Electric diagram	T13079 VS11-S

After completion of erection and prior to commissioning, settings and adjustments the chief erector must make sure that any machine components are properly erected and assembled. Only then the machine may be released for further handling.

Within the safety-relating systems of the control unit only approved parts as well as operating and switching elements acc. to the categories of EN 13849-1 must be used.

The operator company and the operating staff must provide and keep the shop floor such that no danger of slipping exists.

Prior to energizing the electric cabling the chief erector must make sure that any electric cables and connections are properly installed.

Any erection, assembly and disassembly of electric cabling and components must only be carried out by trained and instructed qualified personnel.

Observe the "Five safety rules" before working on electric parts:

1. Switch off
2. Lock against restart
3. Verify absence of voltage
4. Ground and short-circuit
5. Cover or block-off any live adjacent parts.

3.2.1. Anchoring and fixing

The layout drawing as well as the foundation plan are applicable for erection of the TITAN strapping machine. These documents provide the measurements required for anchoring and fixing.

The correct alignment of the individual components is a precondition for proper functioning of the machine:

- **Alignment of travelling rails:**

Horizontal +/- 2 mm height-related tolerance

Parallelism +/- 2 mm to the conveyor

- **Alignment of the strap guide channel system:**

Depending on the application rectangular or parallel +/- 2 mm to the conveyor.

- **Alignment of strap dispenser and accumulator:**

To be positioned acc. to the layout drawing +/- 50 mm.



Information!

Attachment of the bonding anchors must be made only after erection and assembly of the machine frame

---

After the strapping machine with the strap dispenser and accumulator has been positioned correctly, the foundation holes must be drilled in the shop floor. The base plates of the base frame serve as template for drilling.

The attachment holes of the strapping machine must be suitable for Fischer UPAT-UKA bonding anchors (chemical fixing).

Warning!



Observe machine stability! Danger in case of improper anchoring.

Only use the included bonding anchors for anchoring.

The stability of the machine depends on the proper fixing of the bonding anchors.



Information!

Carefully check the machine for proper anchoring and stability after erection and assembly.

- **Attachment of the bonding anchors:**

Prior to attaching the bonding anchors the concrete strength class of the foundation must be specified. The operator of the machine is responsible for the foundation conditions.

The minimum shop floor requirements are as follows:

Min. concrete strength class B25 (25 N/mm² compression strength)

Min. concrete thickness 170 mm

- Drill the borehole rectangular to the foundation surface.
- Observe borehole diameter and borehole depth.
- Remove the drill dust out of the borehole.
- Observe the specified anchoring depth. The depth marking must not be above the concrete surface.
- Inserting the glass cartridge into the borehole:
  Attach the anchor rod to the drill machine and insert it in the bore hole under pressure with switched-on hammer mechanism until the anchor marking is reached.
- Observe the adequate drying time.
- Screw-in by means of a calibrated torque spanner. Observe the torque specified hereafter.

The anchors must be tested at the 1.3-fold value of the admissible tensile load. The test can be considered passed, if under test load conditions the slip does not exceed 0.2 mm.

Anchor size	M16	M20
Nominal borehole diameter	18 mm	25 mm
Borehole depth = insertion depth	125 mm	170 mm
Max. torque for fastening by means of torque spanner	80 Nm	150 Nm
Max. admissible load F (concrete strength class B25)	15 KN	27 KN
Drying time 10- 20°C > 20°C	 20 min 10 min	 20 min 10 min

3.2.2. Assembly of the strapping machine

- Mount the possibly missing components acc. to the assembly drawing.
- Reconnect the pneumatic lines which had been disconnected for transport acc. to the pneumatic diagram.
- Install and fasten the control console and the control cabinet acc. to the layout drawing.
- Lay supply cables and connect them in the control cabinet or resp. control console.
- Reconnect the cable connections which had been disconnected for transport acc. to the electric diagram.

3.3. Commissioning

3.3.1. Technical data

Energy data

Power supply	480 V
Protection class	IP 55
Frequency	60 Hz
Control and valve voltage	24 V DC
Nominal power	approx. 3.0 kW

Compressed air

Pressure at T.O.P	5.0 bar flow pressure
Compressed air quality acc. to DIN ISO 8573-1	3
Air requirement	0.3 Nm³/strapping

Environmental conditions

Ambient temperature	5- 50°C
Air pollution	normal
Levelness of floor	+/-10 mm
Max. air humidity	<40% at 40°C or >100% at 20°C

3.3.2. Preparing the machine ready for operation

In order to prepare the machine ready for operation, proceed as follows:

- Pressure check of the on-site air supply: min. 5 bars flow pressure.
- The shut-off valve of the air service unit must be open.
- Pressure check of the air service unit: set to min. 5 bars.
- Check the strap at dispenser and accumulator
    - Loading of strap as described under chapter 3.3.3
- Main switch ON
- Unlock EMERGENCY STOP and reset fault message by pressing the button "Reset Emergency Stop"
- Press illuminated push button "Control ON“.
    - Signal light "Control ON" is on.
- In case of fault press button "Delete fault".
- Press illuminated push button "Manual"
    - Manual mode is selected, signal light is on.
- Press illuminated push button "Travel to home position"
    - The strapping machine is automatically moved to its home position.
    - Signal light „Home position“ is on when the home position is reached.
- Illuminated push button "home position is on when all conditions are fulfilled. In addition, the menu "home position" displays the machine status "OK" when home position is reached.

Now the machine is in its home position and ready for operation.

3.3.3. Loading the strap



Danger of cuts by the steel strap.

Danger of squeezing:

When the dancer rollers of the strap accumulator are in lifted position and the clamping of the strap is loosened, the rollers drop down.

Personal protective equipment:

Safety shoes, safety glasses, safety gloves, helmet.

Observe the instructions, keep the strap accumulator filled.

The strap dispenser unit **ABS** consists of the components strap dispenser **ARS** and accumulator **BSC**.

Strap dispenser (ARS)

The strap dispenser supplies the strapping machine with the required packaging steel strap.

The dispenser drive is started when steel strap is drawn from the strap accumulator during a strapping cycle.

Strap accumulator (BSC)

The strap accumulator serves to take-up the strap quantity required for the channel filling of one strapping cycle. For strap feed the pneumatic motor of the strapping head draws the strap easily from the strap accumulator.
The excess strap created during strap retraction is guided back to the dancer rollers. Thus loose strap loops are avoided.

For a functional description and operating instructions of the strap dispenser unit ABS please refer to the separate "Operating Instructions".

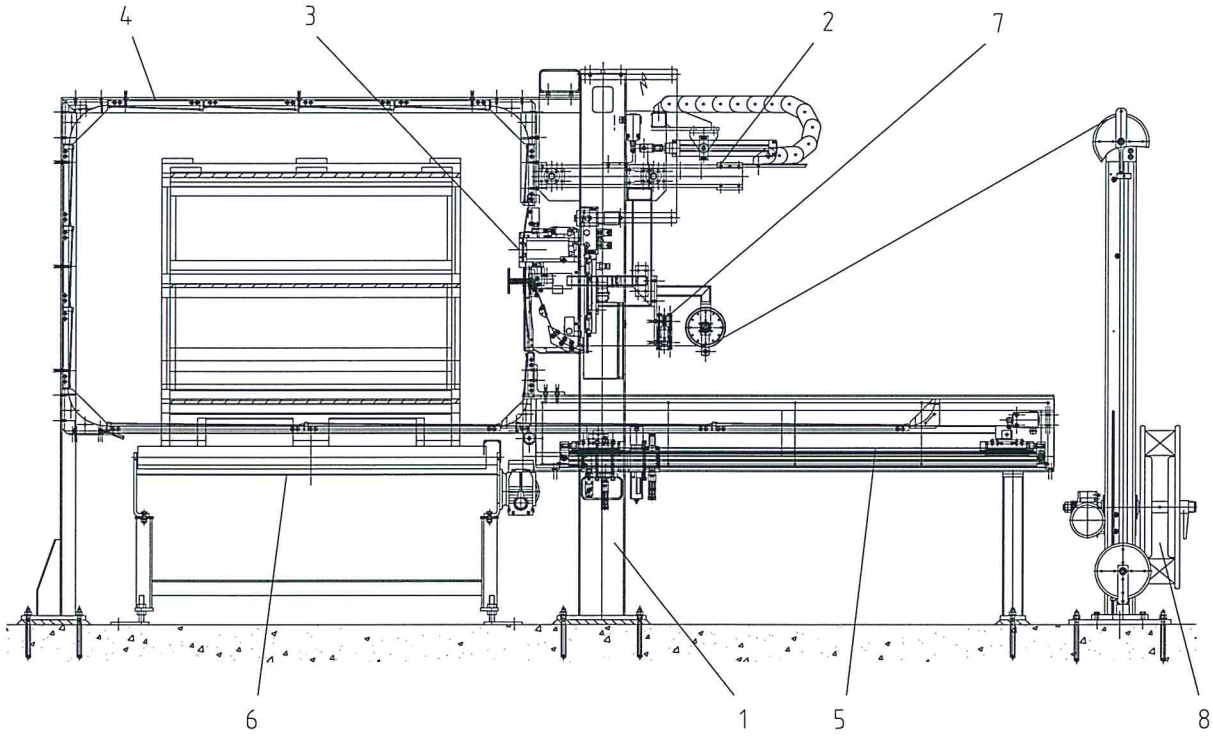
4. Operation

Warning!

Danger of injury of persons when using inappropriate safety equipment.

Use safety barriers (fence) with electrically locked gate.

4.1. Machine components



1	Machine frame	2	Strapping head forward / backward	3	Strapping head VS11-L
4	Strap guide channel	5	Lance	6	On-site conveyor
7	Strap clamp	8	Dispenser ABS		

4.2. Functional description

The TITAN strapping machine operates fully automatically.

The package is indexed by customer's on-site conveyor into the area of the stationary strapping machine.

After the external signal "package in position" the strapping cycle is started.

Strapping cylce:

- Signal "package in position"
- Moving the lower strap guide (lance) through the pallet void
- Strap feed forward – strap guide channel filling
- Moving the strapping head toward the package, max. stroke 300 mm
- Strap take-up from the strap guide channel
- Strap tensioning until the preset tension force is reached
- Joint forming and cutting of the strap
- Moving the strapping head into the rear home position
- Simultaneously retracting the lance
- Release signal to the conveyor
- Moving the package to the next strapping position (conveyor-controlled)
- All further straps are applied as described above.
- After application of the second strap the conveyor receives a release signal for exit of the completely strapped package und infeed of the next package.

Signal exchange with the conveyor control is made potential-free.

4.3. Operation



Information!

The machine may be operated by adequately trained and qualified personnel only.

Training is adequate when:

- **the interrelations and sequences of the individual functions and movements are correctly understood,**
- **the initial (home) positions of all movements are known,**
- **the manual functions can be carried out in correct order,**
- **the interlocking conditions of all movements are understood,**
- **all fault- and malfunction messages are known.**

No persons are allowed to stay in the danger zone of the machine.



Information!

Noise pressure level approx. 85 dB(A) in normal mode.

For safe operation of the machine the operator company must denominate a responsible supervisor.

Any personnel working on the machine must be instructed about these Operating Instructions, the local conditions as well as the safety precautions (instruction to be recorded).

At any phase of operation life the machine may only be operated and handled by qualified personnel who has been thoroughly trained in the machine functions and risks in connection with the machine (training to be recorded). Personal protective equipment to be used at any time.

Observe risk of tripping when entering the hazard zone of the machine.

4.3.1. Mechanical, pneumatical and electrical safety equipment

Safety barrier to other hazard zones by means of:

- Safety fencing in accordance with the current machinery directive
- Electrically controlled safety gate for entrance limitation

The mechanical safety devices provided by TITAN are not operative in case of danger caused by faulty package transport.

The customer must ensure that in case of machine fault the package conveyor area can be accessed e.g. for removal of strapping material.

The machine area is equipped with (safety-) devices.

- Pneumatic cylinder for machine movement, strap feed etc.
- Air service unit combination and valve block shut-off etc.
- Strapping head drives

The machine area is equipped with electrical (safety-) devices:

- Electro-mechanically locked safety gates with access control (enabling contact)
- Local operating units (servicing and strap loading)
- Optical warning signals at customer's central control station after acknowledging the enabling contact of the electro-mechanically locked safety gates.
- Electric drive of the steel strap dispenser

4.3.2. Operation and control elements

Element	*Function*	*Notes*
Control console	Main control element	
Control section strap accumulator	Control of strap dispenser and accumulator for threading-in strap	Accessible in service mode only
Control section strapping head	Control of the strapping head for insertion and removal of strapping material	Accessible in service mode only
Pressure switch	Monitoring of the system pressure in the pneumatic control	

4.3.3. Operation modes

Operation mode	*Function*	*Notes*
Manual	Strapping cycle step-by-step, operator-controlled	
Automatic	Automatic strapping cycle without operator intervention	Strapping cycle is monitored by the operator
Semi-automatic	Operation mode for trouble-shooting and remedy as well as for loading of consumables	Operator enters the danger zone. **Observe safety instructions!**



Warning!

In service mode:

Danger of cuts by the strap.

Danger when opening the strapping. Strap may jump-up when cutting it.

Danger of squeezing! Cylinders may be pressurized. Engage locking bolt.

Personal protective equipment:

Safety shoes, safety glasses, safety gloves, helmet

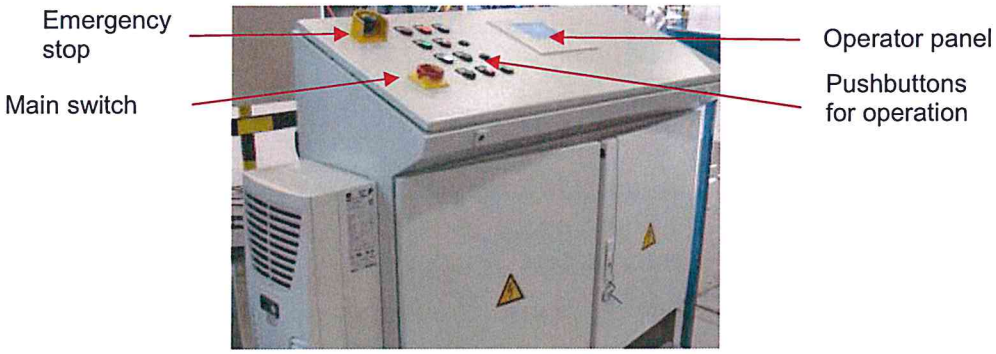


Information!

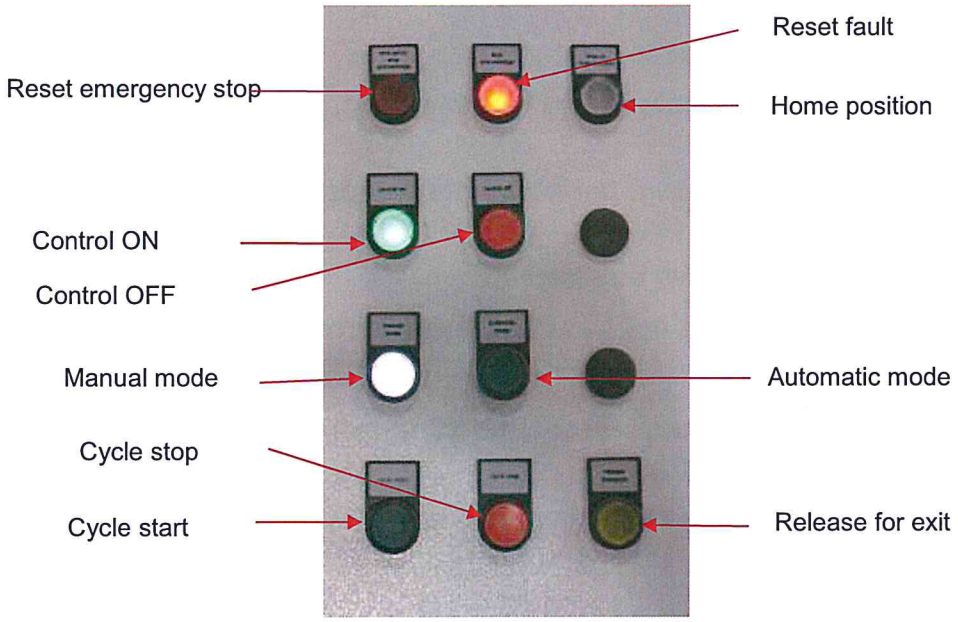
In order to avoid unforeseen machine standstill, service must be carried out regularly:

- **Visual check of bearings, rollers and linear roller bearings**
- **Oil level check**
- **Check of the water separator at the air service unit**

4.3.4. Operation at the control console



4.3.4.1. Pushbuttons



4.3.4.2. Function of the control elements

Emergency stop
By actuating the emergency stop the machine is stopped. The emergency stop switch is unlocked by turning it slightly to the left side.

Reset emergency stop
Activated emergency stop is signaled by illumination of the button.
This switch resets the state "emergency stop" – the illuminated pushbutton is no longer on. In case the state "emergency stop" cannot be reset, the emergency stop switch of the superior control must be unlocked.

Reset fault
Pressing this button resets faults after remedy of the cause. The pushbutton light is no longer on. The cause of the fault can be read from the text display.

Control ON
The push button "Control ON" starts the machine. The machine is activated when the illuminated pushbutton is on.

Control OFF
The machine is stopped by pressing the push button "Control OFF".

Home position run
This button moves the complete machine to home position as long as the button is pressed. When the button is released all movements are stopped.
The machine is in its home position when the illuminated button is on and machine movement has stopped.

Manual mode:
The manual execution of the individual machine function is described under menu "Manual operation".
This screen serves mainly to test the machine functions.

Automatic mode
The strapping cycle which is preset at the superior control is executed automatically.

Cycle start / start of a strapping cycle
This pushbutton starts a strapping cycle.

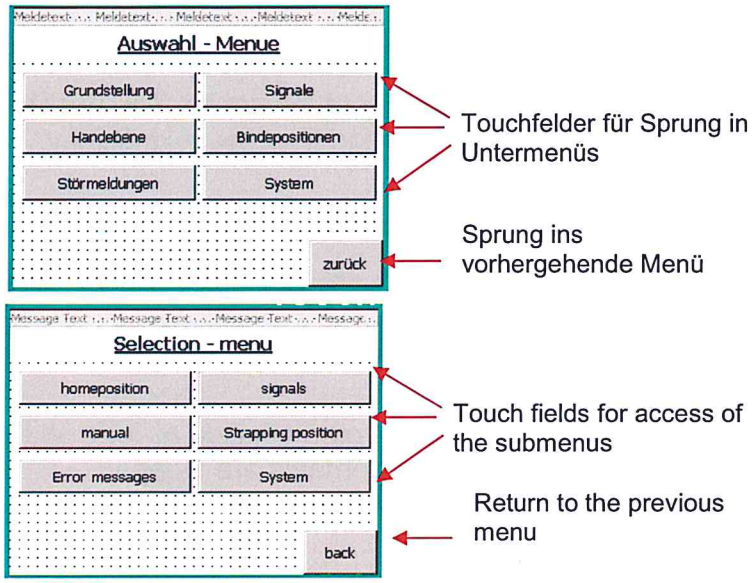
Cylce stop
This pushbutton stops a strapping cycle.

Release transport
By this pushbutton a release signal is transmitted to the conveyor.
When the light is on the release is signaled.
In case the light is blinking the release must be acknowledged by actuating the button, because the machine is in home position, however, had been stopped by a previous fault.

4.3.5. Operation at the operator panel

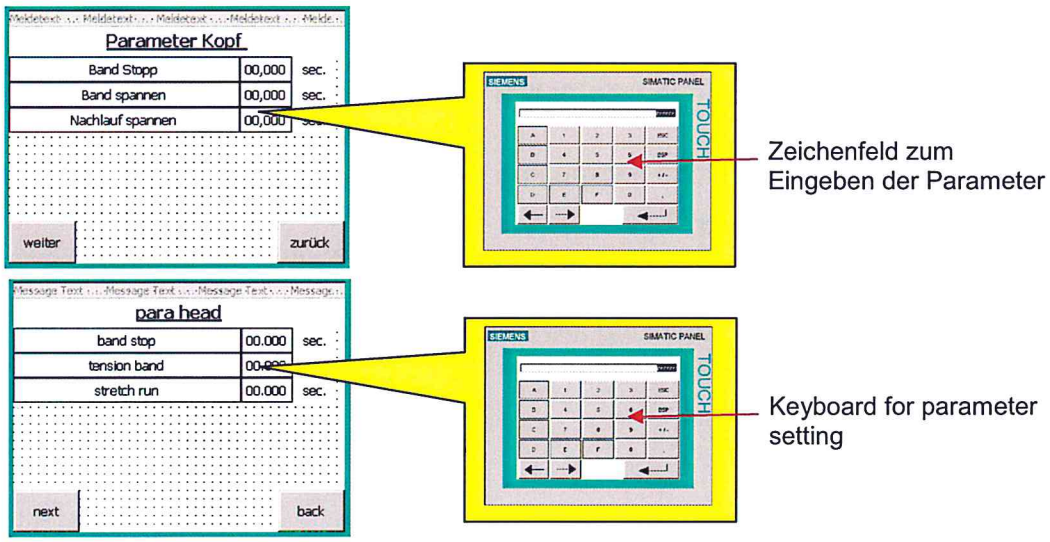
The submenus are opened by pressing the individual function keys in the active menu.

Note: This machine is provided with a Touch Display. That means that the relevant touch pads on the screen need slight touch only in order to be activated and perform the corresponding function.



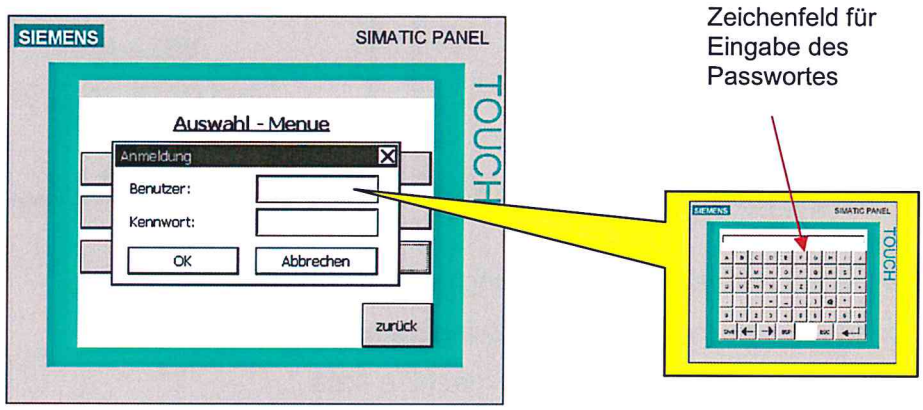
By the individual touch fields in the active screen the corresponding submenus can be accessed.

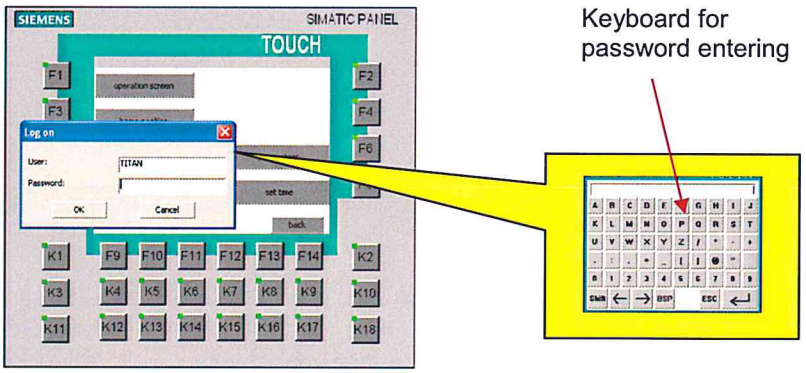
Parameter setting:



- Parameters are set via the touch panel
- An input field is opened automatically
- Parameter input by means of the key board
- Input is confirmed and entered by the enter key and ←/

Some input is password-protected in order to prevent unauthorized persons from modifying the settings.





- The password mask is opened.
- Touching the input field opens a letter/digit keyboard automatically.
- The password can be edited by touching the keys.

user : titan password: 100

- Input is confirmed and entered by the enter key ←/.

4.3.6. Operator surface at of the OP - Menus

Menu – Start





The start menu appears after switching on the machine.

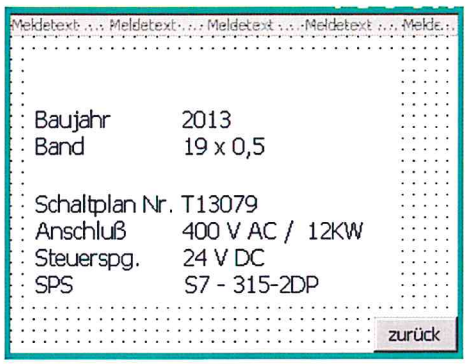
By actuating the touch pads the following menus can be accessed:

- **Info** – Manufacturer's address and machine data
- **Menu** – Jump to the operator surface

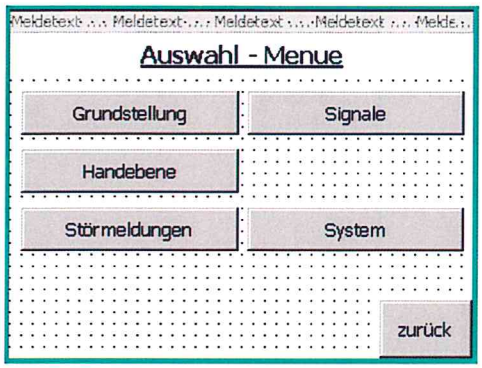
Menu - Info

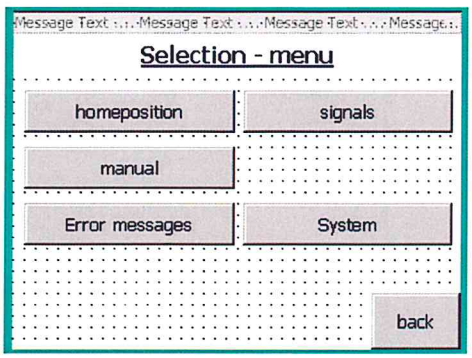






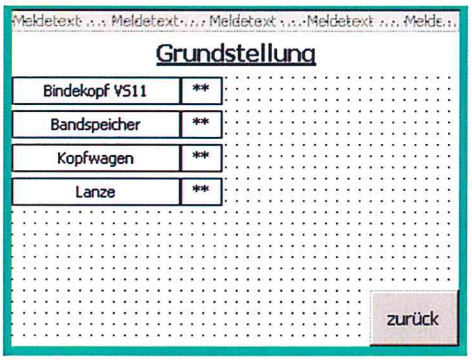
Menu – Selection

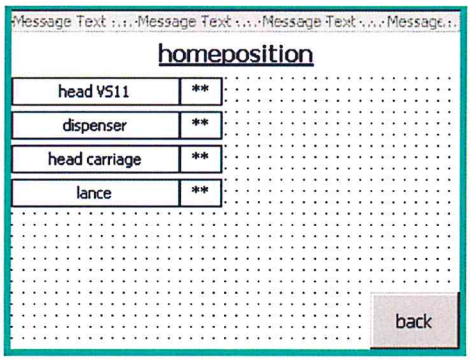




From the main menu the individual submenus can be accessed:
- Home position
- Manual mode
- Signals status values
- Strapping positions
- Faults
- System OP

Menu – Home position



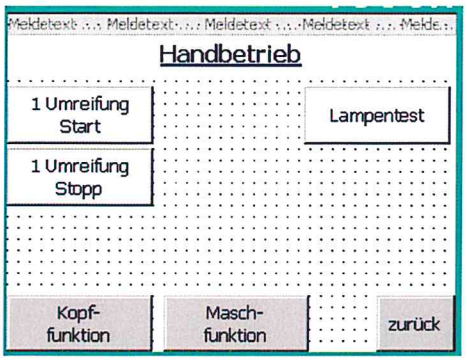


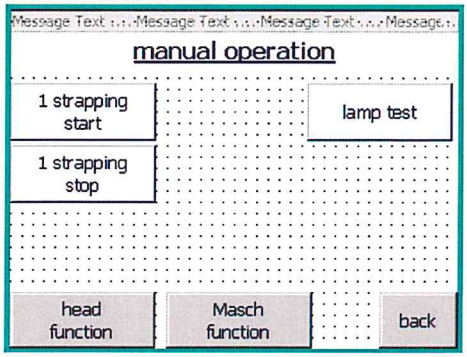
This menu serves to diagnostics. It provides information on the current position of strapping head, strap accumulator.....

The machine home positions can be controlled here. In case the home position of an individual component has not been reached the display shows „ ** „.

The machine is in home position when all information fields show "OK".

Menu – Manual operation





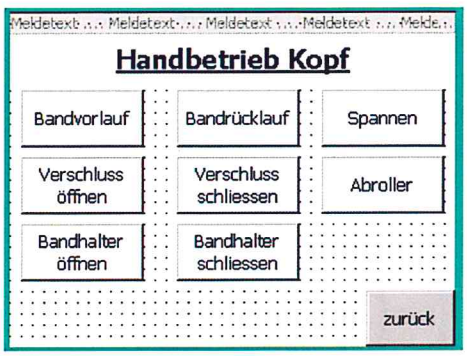
1 strapping start / stop
Pressing these buttons starts or stops a strapping cycle if the machine is in home position. This is possible in "manual mode" only (semi-automatic).

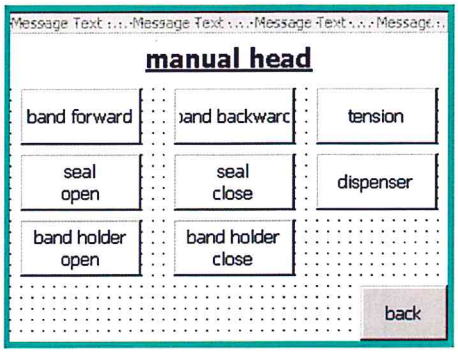
Lamp test
Pressing this button activates all illuminated pushbutton. The function serves to test the lights.

From this menu the following submenus can be accessed:

- Manual VS 11 strapping head
- Manual machine functions

Menu – Manual mode strapping head





By this menu the individual functions can be tested in manual mode.

Strap feed forward (band forward)
Pressing this button activates the strap feeding motor as long as the button is pressed. After reaching the strapping head, the strap feed forward is stopped. The strap feeding motor operates only with the cam gear in home position.

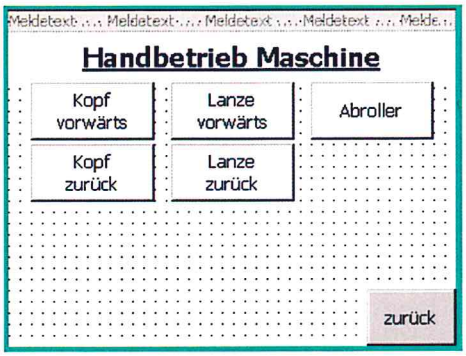
Pressing the button "strap feed backward" (band backward) activates the strap retraction motor as long as the button is pressed.

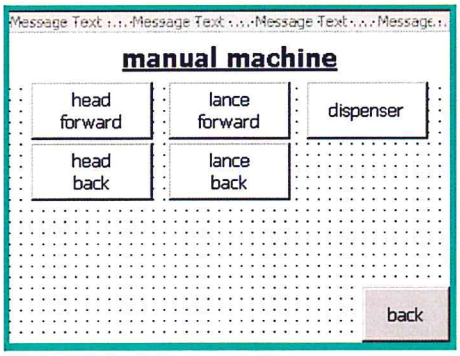
Tensioning:
Pressing the button "tension" activates the tensioning motor as long as this button is pressed.

Sealing
The button "seal open" activates the cam gar motor as long as the button is pressed. After reaching the opening position the drive is stopped.

The button "seal close" activates the cam gar motor as long as the button is pressed. After reaching the zero position (head closed) the drive is stopped.

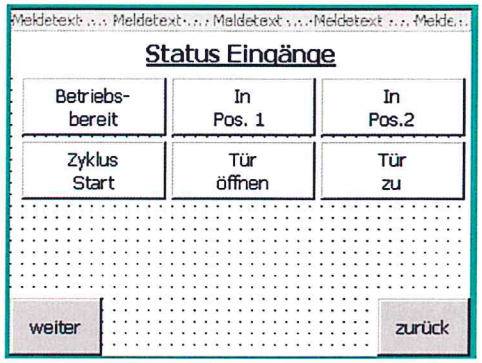
Menu – Manual mode machine

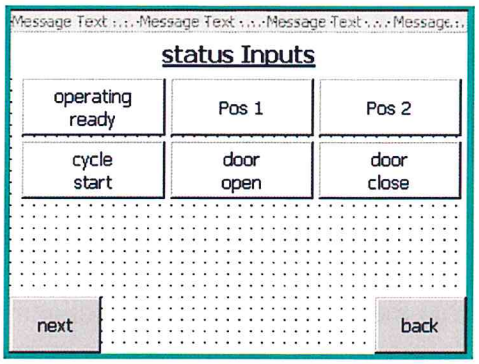




By this menu the individual machine functions can be tested in manual mode.

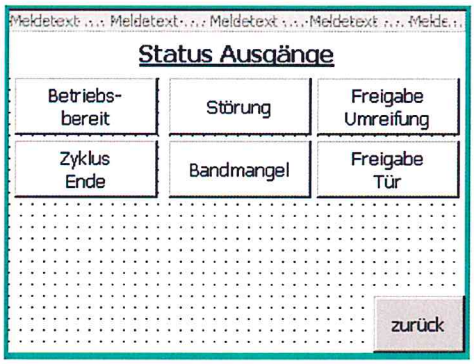
Menu – Status inputs

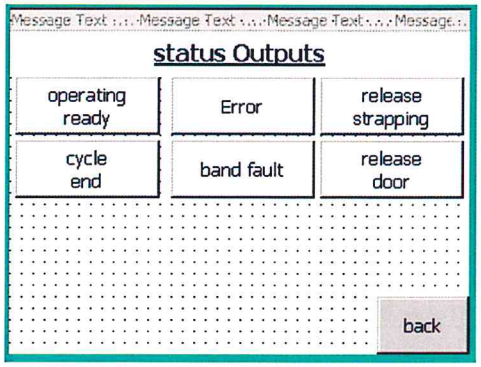




By this menu the status' of the selected input signals is displayed.
Signal 1 = dark-shaded field

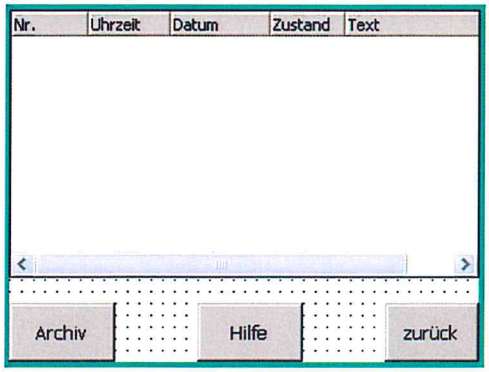
Menu – Status outputs

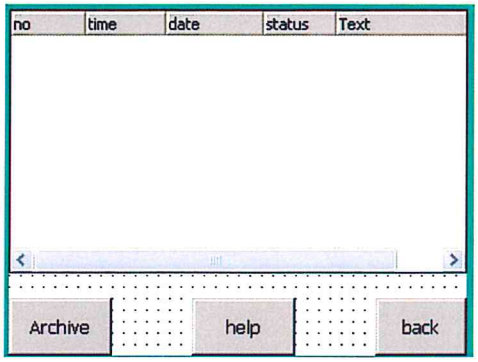




By this menu the status' of the selected output signals is displayed.
Signal 1 = dark-shaded field

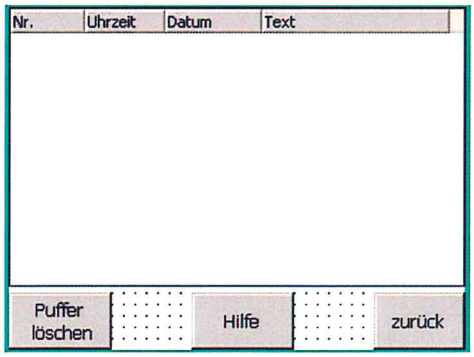
Menu – Fault messages

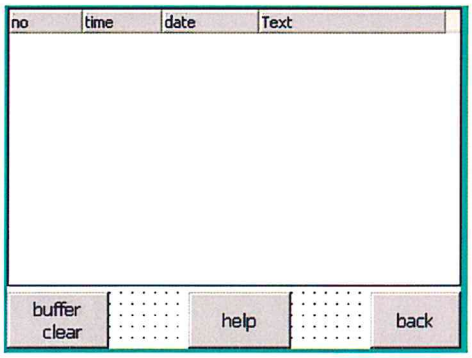




The scroll bar serves to scroll up/down the fault messages in case there are more messages than one screen can display. The latest message is always displayed on the screen top.

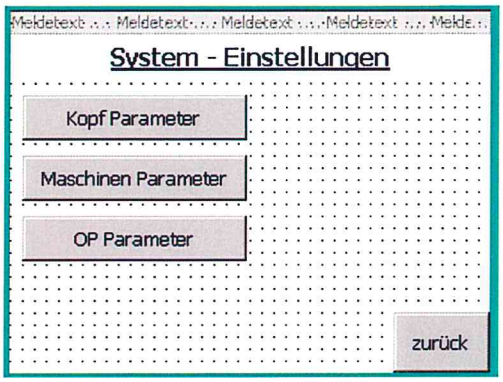
The message buffer is accessed by means of the button "archive". All messages since the last deleting of the message buffer are displayed here.

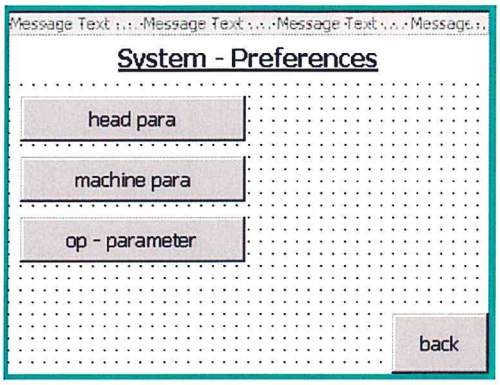




Buffer clear – When deleting the message buffer only the active messages remain on the screen.

Menu - System

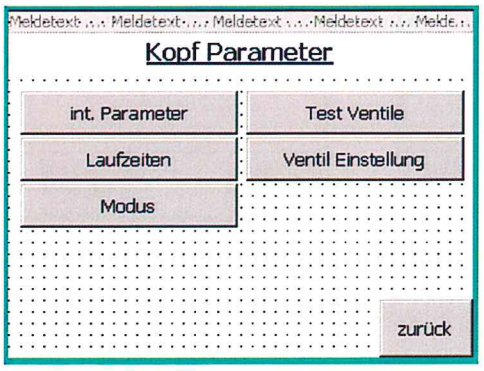


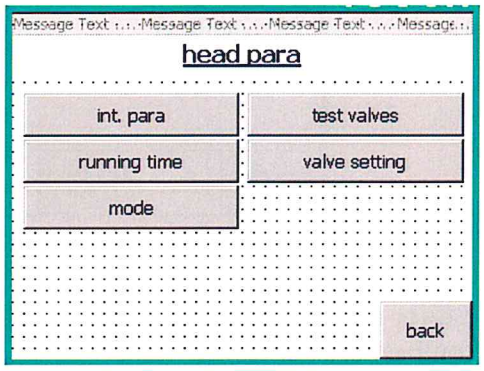


From this screen the operator can jump to the following submenus.

Head para:	settings at the strapping head
Machine para:	settings of the strapping machine
OP parameter:	OP system settings

Menu – Head parameter VS 11



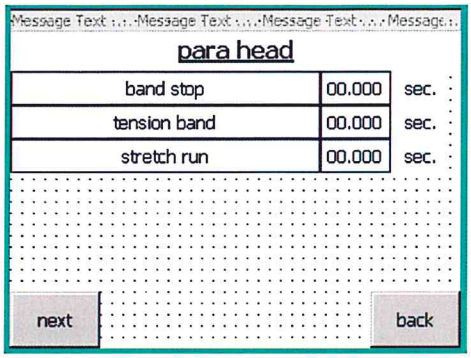


From this screen the following submenus are reached:

Int. Para:	Settings at the strapping head
Running time:	Monitoring parameters of the strapping machine
Mode:	Presetting at the strapping head
Test valves:	Manual valve control
Valve setting:	Speed setting – valve control

Menu – Internal head parameters VS 11

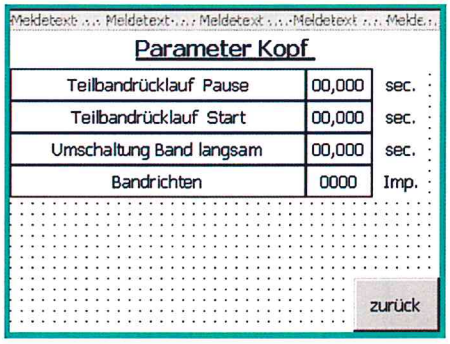


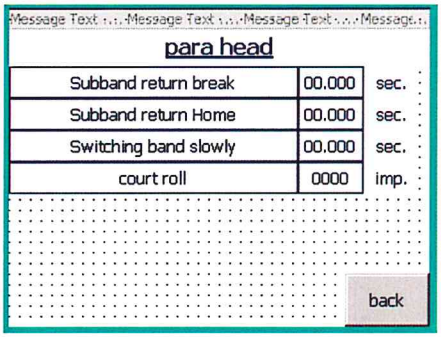


Strap stop (band stop)
The strap is stopped after the preset time.

Tensioning (tension band)
Strap tensioning terminated after the preset time.

Stretch run
The time for motor to maintain the tension force until the second clamping is done.





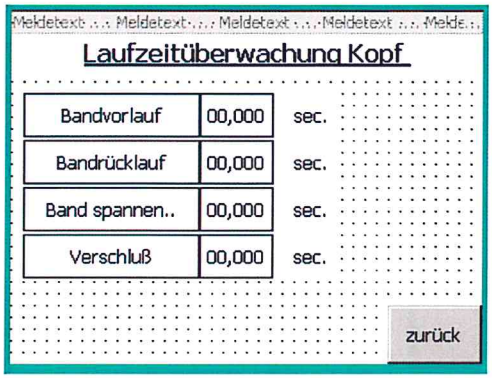
Partial strap take-up (subband return break)
Delay for starting the partial strap take-up (feed backward).

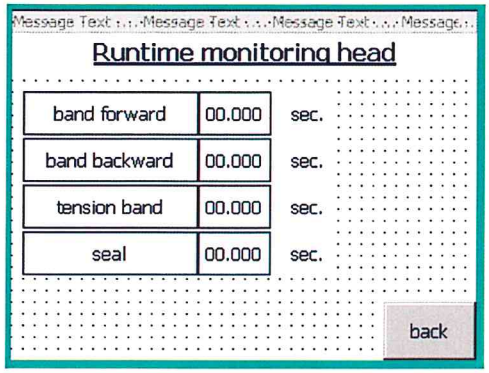
Partial strap take-up start (subband return Home)
Duration of partial strap take-up (feed backward).

Switching band slowly
Switching time from changeover of "strap feed forward" to "strap feed forward slowly"

Strap straightening (court roll)
Pulse for triggering the straightening rollers.

Menu – Run time monitoring

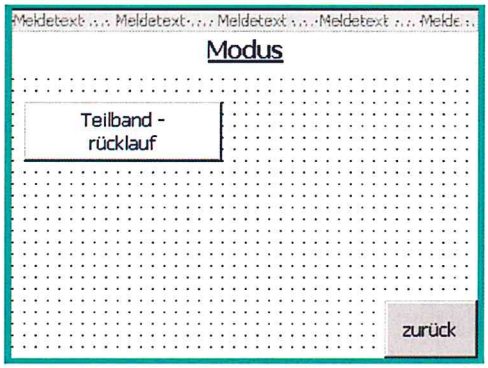


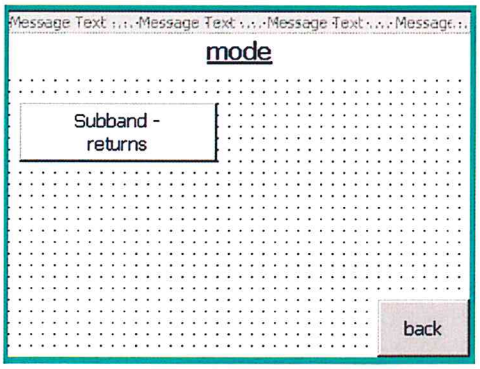


Strap feed forward (band forward)
Max. timeframe for execution of the function until the function is interrupted and a fault message displayed.

Same applies to all other functions.

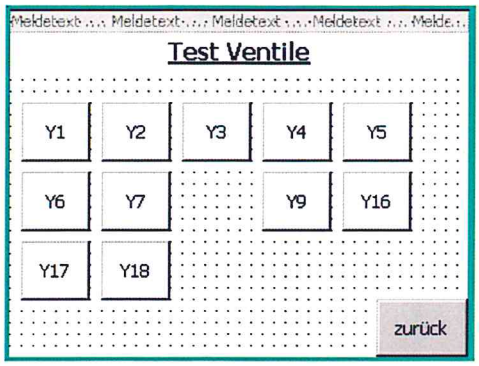
Menu – Mode

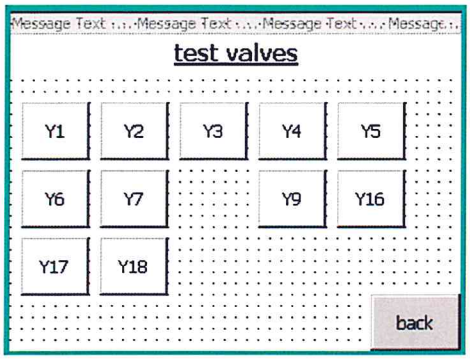




Presetting of the strapping process with its corresponding functions

Menü – Test valves

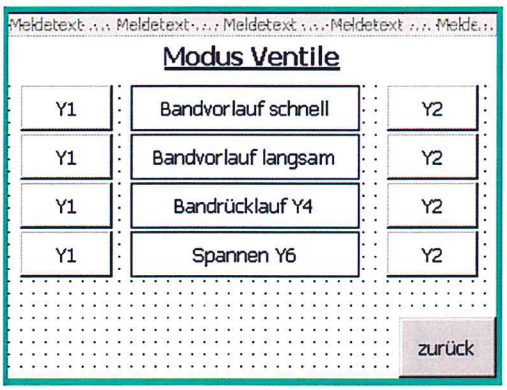


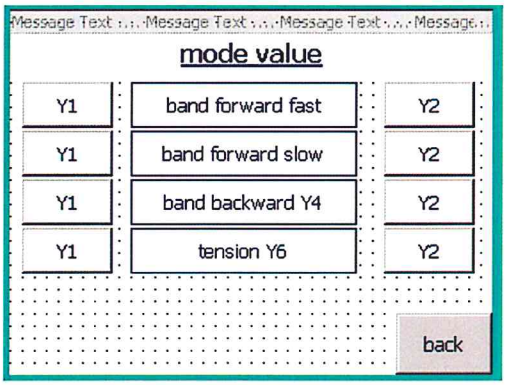


The menu "test valves" provides the possibility of testing the functions without interlocking. By pressing the corresponding valve buttons the functions are executed.

Attention!
Incorrect operation may damage the machine. Therefore, this menu is password-protected.

Menu – Mode valves





Valve settings

Presetting of the pneumatic valves Y1 and Y2 at the strapping head

3 speeds for the pneumatic motors at the strapping head are provided:

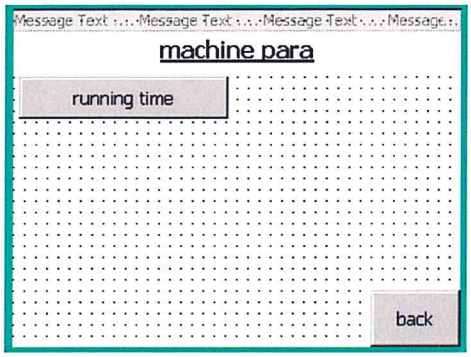
1.	Low	Y1 OFF	and	Y2 OFF
2.	Medium	Y1 ON	and	Y2 OFF
3.	High	Y1 ON	and	Y2 ON

These setting are available for the following motors:

1. Strap feeding
2. Strap take-up (feed backward)
3. Partial strap take-up
4. Strap tensioning

Menu – Machine parameters

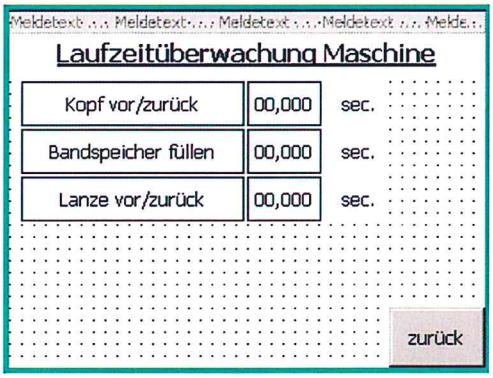


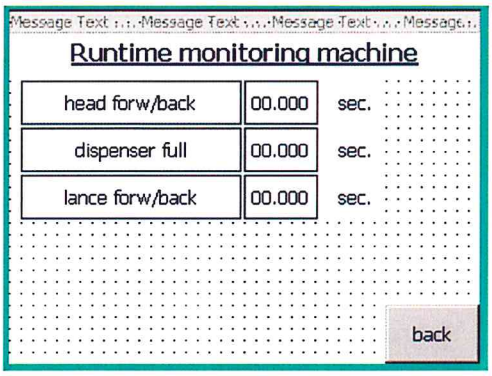


From this screen the following submenus can be accessed:

Running time: Monitoring parameters of the strapping machine

Menu – Runtime monitoring machine

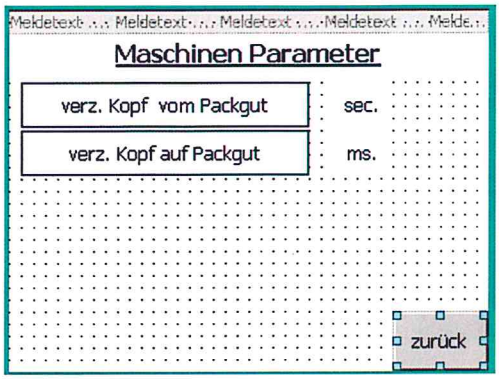


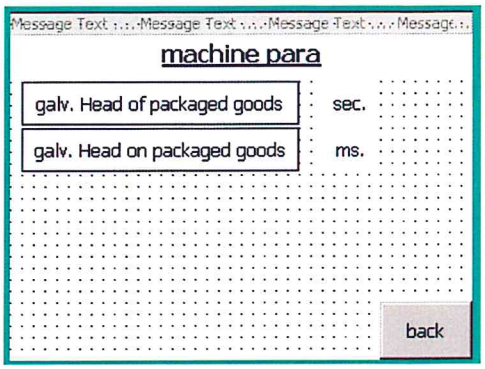


Head forw/backw
Max. timeframe for execution of the function until the function is interrupted and a fault message is displayed.

The same applies to all other functions.

Menu – Machine parameters (option)

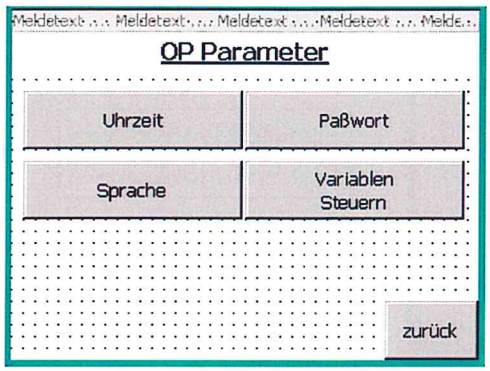


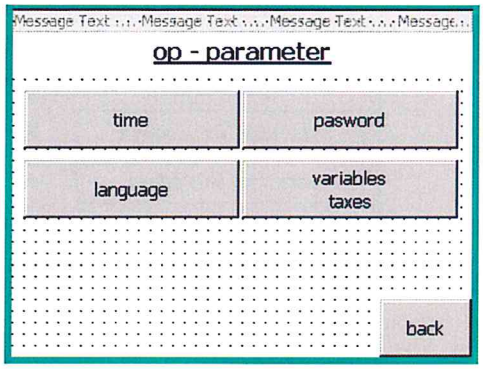


Delay head off the package (galv. Head of packaged goods)
Input of the delay time for stopping the head movement away from the package (for next positioning)

Delay head on the package (galv. Head on packaged goods)
Input of the delay time for stopping the head movement onto the package (for setting the gap between head and package)

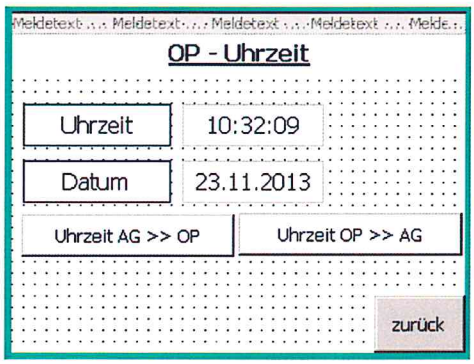
Menu – OP parameters

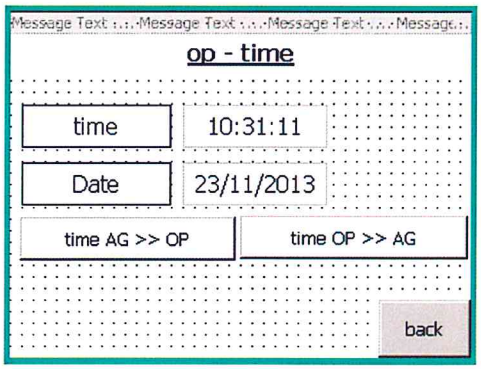




Time: Screen for input of date/time is opened.
Password: Modification of the password
Language: Language changeover
Variables control (variable taxes)**:** Screen for control of selected variables

Menu – OP Time

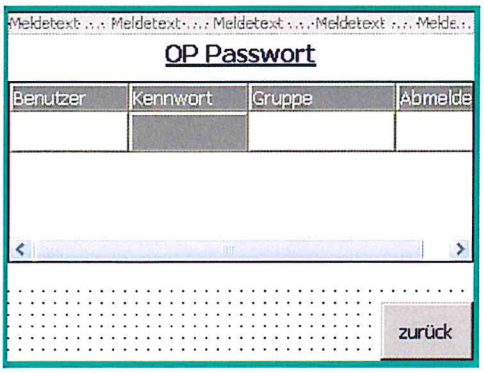


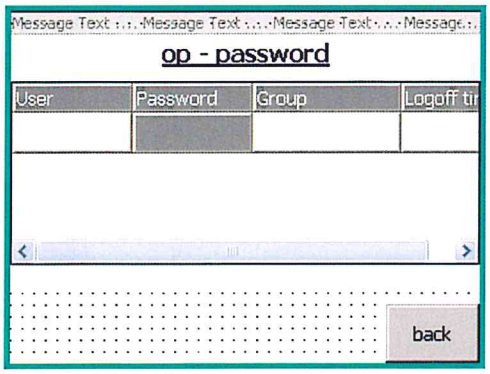


This menu serves to edit date / time.

Meaning of the function keys:
Time output device>OP – Date and time are loaded from PLC into the OP.
Time OP>output device – Date and time are loaded from OP into the PLC:

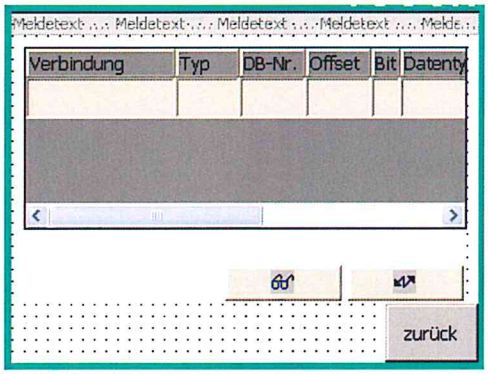
Menu – Password

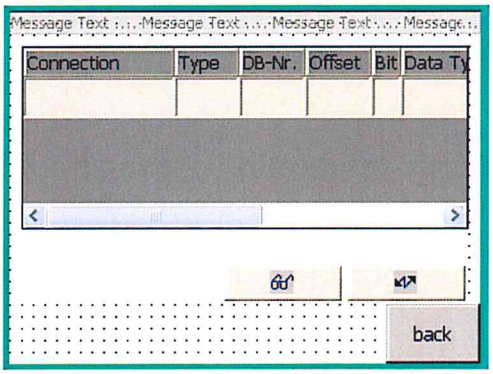




This menu serves to edit the passwords and to define their level.

Menu – Variable control

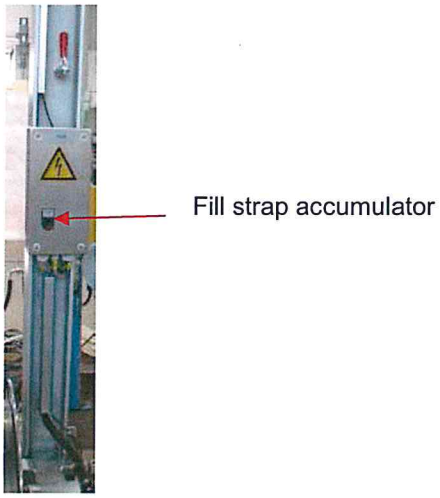




This screen serves as a means of trouble shooting. The variables to be controlled can be listed in the table.

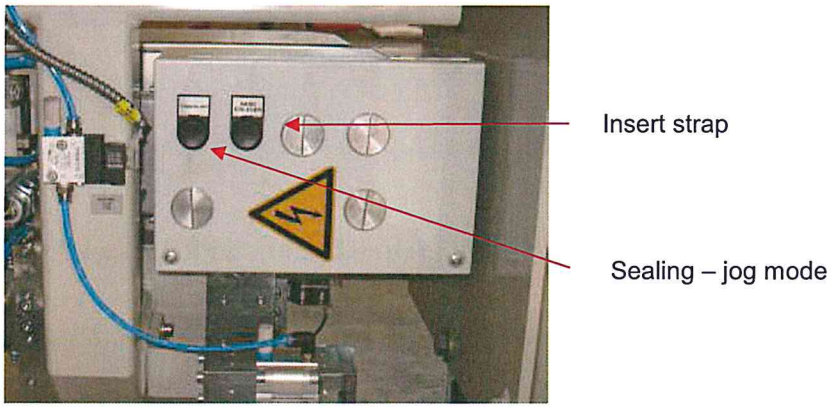
Attention! This function may only be used by qualified personnel.

4.3.7. Operation of dispenser / accumulator



Fill strap accumulator
By pressing this button the strap accumulator is filled. When filling is completed the drive is stopped automatically.

4.3.8. Operation at the strapping head



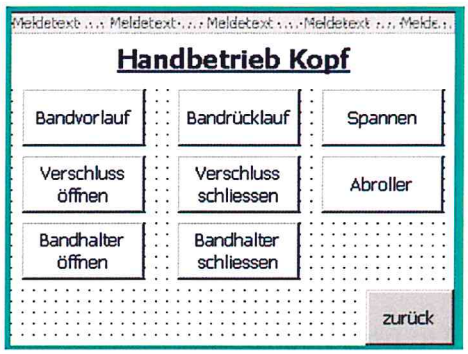
Insert strap
When pressing this button the strap clamp is opened for insertation of the strap.

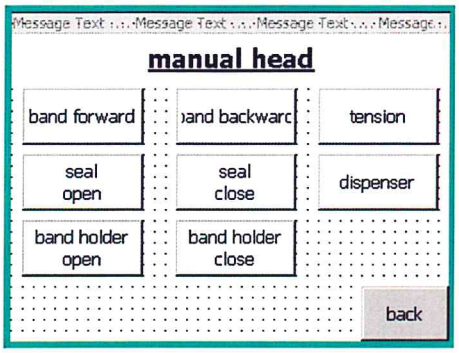
Sealing – jog mode
Pressing the button activates the sealing motor (cam gear motor) as long as the button is pressed. After reaching the home position the motor is stopped.

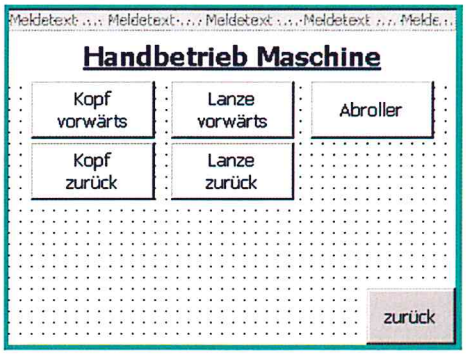
Short pressing of the button moves the cam gear to the individual positions step by step.

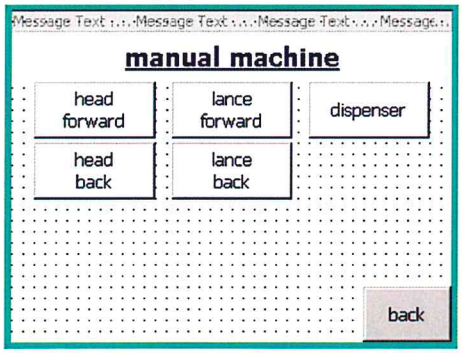
4.3.9. Manual mode head / semi-automatic

The manual execution of the machine functions is described under the menus *"manual machine"* and *"manual head"*. These menus mainly serve to test the functions.

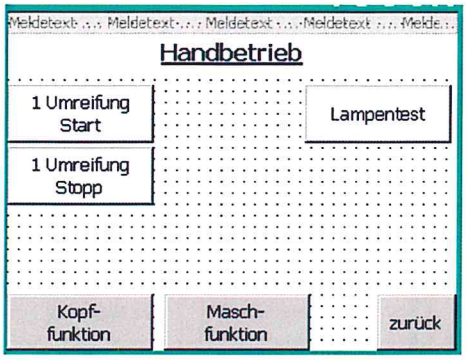


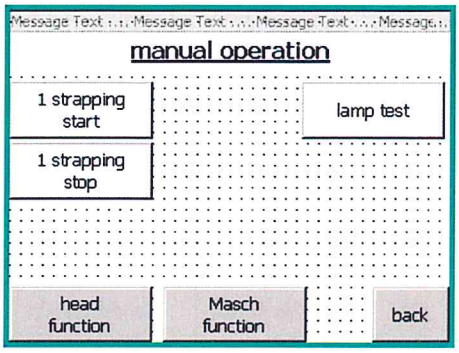






Manual operation / semi-automatic





The manual start of a strapping cycle is possible in manual mode *(manual operation)*. Performing a complete strapping cycle requires the following steps / conditions:

1. Package in strapping position
2. Machine ready for operation – travel to home position
3. Selection "manual mode"
4. Performing the individual functions by means of the button **"1 strapping start"**

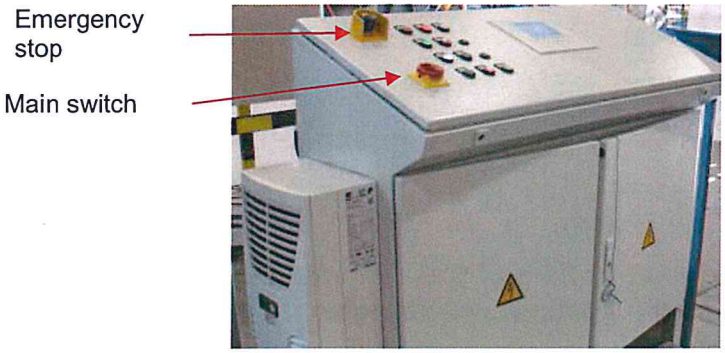
5. The cycle is stopped by the button ***1 strapping stop***.

Infeed and exit of a package is only possible with the machine in home position!

4.3.10. Automatic mode

1. Move machine to home position
2. Select automatic mode.
3. Start signal for the strapping cycle transmitted by the conveyor system.
4. Cycle started.
5. Exit of the strapped package.

4.3.11. Switch-off routines / emergency stop



4.3.11.1. Switching off the machine by means of the main switch

- Move machine to home position.
- Deactivate control at the control console by the button *Control off*
- Switch the machine off by means of the main switch

4.3.11.2. Switching the machine off in emergencies by means of the emergency stop switch

In case of emergency the machine can be stopped by means of the emergency stop switches. All functions are stopped and the control is deactivated.

Caution! The control console is not de-energized.

4.3.12. Restart after intervention

- After trouble-shooting the emergency stop switch must be unlocked and the fault reset by the button "reset emergency stop".
- The emergency stop switch can be unlocked by a slight turn to the left side.
- Press illuminated push button „control ON“.
  Signal light "control ON" is on.
- In case of faults press the button "delete fault".
- Set key switch to operation mode "manual". The signal light is on.
- Press illuminated push button "home position run"
  The strapping machine is automatically moved to its home position.
  The illuminated push button "home position" is on when the home position has been reached.

The machine is in home position and ready for operation.

5. Trouble shooting and remedy



Warning!

In service mode:

Danger of cuts by the steel strap.

Danger when loosening the strapping. Strap may jump up when cutting it.

Danger of squeezing:

When the dancer rollers of the strap accumulator are in lifted position and the clamping of the strap is loosened, the rollers drop down.

Personal protective equipment:

Safety shoes, safety glasses, safety gloves, helmet.

Observe the instructions, keep strap accumulator filled.



Information!

Trouble-shooting and remedy must be carried out by adequately trained and qualified personnel only.

Training is adequate when:

- **the interrelations and sequences of the individual functions and movements are correctly understood,**
- **the initial (home) positions of all movements are known,**
- **the manual functions can be carried out in correct order,**
- **the interlocking conditions of all movements are understood,**
- **all fault- and malfunction messages are known.**



Caution! Danger to life!

When the machine / production line is completely switched-off for maintenance and repair it must be secured against unexpected re-start. Lock the main control devices, remove key and / or attach warning sign at the mains switch.

Secure the maintenance area, as far as required!



Caution! Danger to life!

After every retrofit, repair or modification of the machine it must be ensured that:

- **the protective equipment required for safety is active (light barriers),**
- **access to the danger zone is only possible through the protective fencing**

Caution! Danger to life!



Any work at the electrical installations or devices must only be carried out by a qualified electrician or by adequately trained persons under supervision of an electrician and in accordance with the prevailing regulations.

Caution! Danger to life!



Machines or components of the production line must be de-energized for inspection, maintenance and repair, if required. It must be verified that the components are de-energized. Then they must be earthed and short-circuited. Adjacent components which are live must be insulated and secured against re-start.

Caution! Danger to life!



The electrical installation of a machine / production line must be inspected / checked regularly. Any defects, such as loose connections or melted cables must be repaired immediately.

Caution! Danger to life!



When working on live components a second person must attend the work in order to actuate the mains switch or the emergency stop in case of emergency.
The working area must be secured by means of a red / white safety chain and a warning sign.
Use adequately insulated tools only!

Warning!



Particular attention must be paid to the electro-statically endangered components.
Damages to these components are avoided by proper use of the protective equipment and responsible observance of the regulations and instructions.

Warning!



When replacing fuses, only those of the same type, characteristics and voltage must be used.
For protection of electronic components special fuses are often used. In these cases particular attention must be paid to the choice of the replacement material.

Caution! Danger to life!



It is strictly prohibited to remove or bridge any protective equipment of the machine / production line.
Such equipment is amongst others adapter rings of screwed joints, motor protection switches, thermistors or software-based protection and locking systems.

Fault messages are displayed at the control console (OP).

General:

After a fault:

- Remedy fault.
- Reset fault by the button „Reset fault“.
- Move machine to home position.
- Release transport.

5.1. Fault messages

Fault	Cause	Remedy
02 - Motorschutz Abroller 02 - Motor protection dispenser	Short circuit or overcurrent Circuit breakers Motor protection switch	Check outgoing circuits Remedy fault Reactivate circuit breakers / motor protection
03 - Redundanzmodul Input 1 03 - Redundancy Module Input 1	Fuse tripped Voltage too high	Check fuse Remove short circuit Check cables
04 - Redundanzmodul Input 2 04 - Redundancy Module Input 2	Fuse tripped Voltage too high	Check fuse Remove short circuit Check cables
05 - Redundanznetzgerät 1 05 - redundant power supply 1	Fuse tripped Voltage too high	Check fuse Remove short circuit Check cables
06 - Redundanznetzgerät 2 06 - redundant power supply 2	Fuse tripped Voltage too high	Check fuse Remove short circuit Check cables
08 - Absicherung Fremdeinspeisung 230V AC 08 - Hedges (fuses) of foreign supply 230V AC	Circuit breaker tripped Leakage current too high	Measure current at outgoing circuits Reactivate circuit breaker
09 - Motorschutz Trafo 480V/230V 09 - Motor Protection Transformer 480V/230V	Overload, short circuit or overcurrent	Measure current Check settings Check cables Reactivate motor protection
10 - FI Schutzschalter Fremdeinspeisung 230V AC 10 - FI protection switch external power supply 230V AC	Fuse tripped Leakage current too high	Check fuse Measure current Remove short circuit Check cables
11 - Sitop Select 4 kanaliges Diagnosemodul 11 - 4 channel SITOP select diagnosis module	Fuse tripped	Check fuse Measure current Remove short circuit Check cables
12 - Not-Aus ausgelöst 12 - emergency stop	Emergency stop at the control console triggered	Reset emergency stop
18 - Zyklus Stop vom Transport 18 - Stop from transport	Stop signal via signal exchange with conveyor	Release transport (conveyor control)
20 - Bandmangel Abroller - Kein Band vorhanden 20 - Dispenser deficiency - no band available	No strap available	Reload new strap coil
21 - Bandmangel Abroller - Schlaufenturm oben 21 - Dispenser deficiency - loop tower (accumulator) above	No strap available	Check strap guide

22 - Laufzeitüberwachung Abroller 22 - runtime monitoring dispenser	Runtime monitoring tripped	Check limit switches Check switch function If required, extend timeframe
23 - Laufzeitüberwachung Kopfwagen - vor/zurück 23 - runtime monitoring head carriage - front / back	Monitoring timeframe exceeded	Check monitoring time Check mechanical equipment
24 - Laufzeitüberwachung Bandstütze 24 - runtime monitoring holder	Monitoring timeframe exceeded	Check monitoring time Check mechanical equipment
26 - Versorgung 220V Primär für 24VDC Maschine 26 - 220V primary supply for 24VDC machine	Circuit breaker tripped	Measure current at outgoing circuits Remedy fault Reactivate circuit breaker
27 - Versorgung 24V DC Maschine 27 - Supply 24V DC machine	Circuit breaker tripped	Measure current at outgoing circuits Remedy fault Reactivate circuit breaker
37 - Druckluft nicht vorhanden 37 - Air not available	Info	Check air pressure Check setting of pressure switch

Fault messages after interruption of strapping		
100 - Schritt 1 Start abgebrochen 100 - Step 1 Start aborted	Cycle interrupted by the operator	Re-start
101 - Schritt 2 Fehler Schrittkette 101 - Step 2 Step Sequence Error	Internal fault	In case of frequent occurrence call the TITAN customer service.
102 - Schritt 3 Fehler Kopf nicht in 0 Position 102 - Step 3 Error head is not in position 0	Head position not at O-position	Check sensor
103 - Schritt 4 Fehler Band nicht im Kopf angekommen 103 - Step 4 did not arrive error band in head (strap not inside head)	The strap is not fed into the strapping head within the preset timeframe. Possible cause: Strap guide channel, strap infeed, strap guides damaged or misaligned	Cut the strap by keeping the "0-position"-button pressed.
104 - Schritt 5 Fehler Rückmeldung Bandvorlauf Stop nicht vorhanden 104 - Step 5 error feedback preprocessing stop band does not exist (strap feed stop not available)	The strap does not reach the	Check mechanical equipment

105 - Schritt 6 Band nicht geklemmt 105 - Step 6 not clamped band	Sealing motor overrides the stop position	Check positioning sensor "head at package"
106 - Schritt 7 Fehler Bandführungsklappe nicht geöffnet 106 - Step 7 error band guide flap not open	Internal monitoring time	Check mechanical equipment
107 - Schritt 8 Fehler Bandführungsklappe nicht geöffnet 107 - Step 8 error band guide flap not open	Internal monitoring time	Check mechanical equipment Check sensors
108 - Schritt 9 Fehler Teilbandrücklauf 108 - Step 9 subband error return (error strap take-up)	Internal monitoring time	Check mechanical equipment
109 - Schritt 10 Fehler Kopf nicht am Packstück 109 - Step 10 fault not head to the package	Strapping head did not reach the package within the timeframe	Check positioning sensor "head at package"
110 - Schritt 11 Fehler Bandstillstand 110 - Step 11 fault band stoppage	Mechanical fault	Check mechanical equipment
111 - Schritt 12 Fehler Spannantrieb 111 - Step 12 fault tensioning drive	The tensioning motor does not tension properly.	Check tensioning motor
112 - Schritt 13 Fehler Spannkraft nicht erreicht 112 - step 13 does not reach error resilience (preset tension force)	The tensioning motor does not tension properly.	Check tensioning motor Check monitoring time setting
113 - Schritt 14 Fehler Verschlussantrieb 113 - Step 14 fault sealing drive	Motor blocking, Tensioning drive does reverse	Check sealing motor (cam gear motor) Check tension force setting
114 - Schritt 15 Fehler Spannantrieb läuft nach 114 - Step 15 errors is to drive runs (motor stop delay)	Strap torn Incorrect strapping head setting	Start new strapping cycle Check tension force setting
115 - Schritt 16 Fehler Verschluss nicht in 0 Position 115 - Step 16 fault closure is not in position 0 (seal not in position)	Sealing motor (cam gear motor) not in home position	Check position encoder "0-position" of the cam gear motor

116 - Schritt 17 Fehler Zähler wurde nicht gelöscht 116 - Step 17 error counter has not been cleared	Internal fault	In case of frequent occurrence call the TITAN customer service.
117 - Schritt 18 Fehler Bandrichten startet nicht 117 - Step 18 Align error band does not start	Internal fault	In case of frequent occurrence call the TITAN customer service.
118 - Schritt 19 Fehler Bandrichten nicht beendet 118 - Step 19 Align error band is not finished	Strap straightening could not be terminated.	Check sensors at the counter disc
119 - Schritt 20 Fehler Bindekopf am Paket 119 - Step 20 fault binding head on package	Internal fault	Check mechanical equipment
120 - Schritt 21 Fehler Bandführungsklappe nicht geschlossen 120 - Step 21 fault belt guide cover is not closed (strap guide flap not closed)		Check mechanical equipment
121 - Schritt 22 Fehler Bandführung nicht geschlossen 121 – step 22 – fault strap guide not closed		Check mechanical equipment
122 - Schritt 23 Fehler Bandrichten nicht beendet 122 - Step 23 Align error band is not finished		Check mechanical equipment
123 - Schritt 24 Schrittkette nicht beendet 123 - Step 24 step sequence not finish	Internal monitoring time	Check mechanical equipment

6. Service and maintenance

Warning!

Danger of cuts by the steel strap.

Danger when loosening the strapping. Strap may jump-up when cutting it.



Danger of squeezing:

When the dancer rollers of the strap accumulator are in lifted position and the clamping of the strap is loosened, the rollers drop down.

Personal protective equipment:

Safety shoes, safety glasses, safety gloves, helmet.

Observe the instructions, keep strap accumulator filled.

Information!

Service and maintenance of the TITAN strapping machine must only be carried out by personnel with professional training in mechanical or electrical engineering.

Furthermore these personnel must be adequately trained in the machine functions:



Training is adequate when:

- **the interrelations and sequences of the individual functions and movements are correctly understood,**
- **the initial (home) positions of all movements are known,**
- **the manual functions can be carried out in correct order,**
- **the interlocking conditions of all movements are understood,**
- **all fault- and malfunction messages are known.**



Information!

For maintenance the machine must be switched-off at the mains switch and secured against re-starting.

6.1. General

The strapping machine can only be kept constantly ready for operation by regular and careful maintenance.

1. Always keep the machine in clean condition.
2. Keep guiding devices, channel system, strap guides, strap accumulator, dispenser and the sealing zone free from contamination and foreign matter.

TITAN strapping machines are pre-lubricated by the manufacturer. This applies to all bearing points or resp. guiding devices as far as they require lubrication.

For re-lubrication of roller bearings and linear roller bearings we recommend high-quality pressure-proof bearing lubricant, preferably lithium saponified lubricant of consistency class NLGI 2 acc. to DIN 51818.

The lubrication intervals are approx. 2 – 3 months depending on the application conditions.

The lubricant quantity depends on the size of the lubrication point. In principle, however, lubricant must be refilled until it emerges visibly.

For lubrication of chain drives always use low viscosity-lubricant NLGI 1-2.



Information!

For maintenance of the strapping head please refer to the separate Operating Instructions.

6.2. Maintenance of the TITAN strapping machine



Information!

Attach an additional sign at the control console when carrying out maintenance work:

Caution!

Do not start! – Maintenance being undertaken!



Warning!

Secure the mains switch by U-lock against unintended or negligent re-start of the machine.



Caution! Danger of life!

Machines or components of the production line must be de-energized for inspection, maintenance and repair, if required. It must be verified that the components are de-energized. Then they must be earthed and short-circuited. Adjacent components which are live must be insulated and secured against re-start.



Caution! Danger of life!

Any work at the electrical installations and devices must only be carried out by qualified electrician or by adequately trained persons under supervision of an electrician an in accordance with the prevailing regulations.

Intervals	*Location*	*Task*	*Lubricant*
Every 300 hours of operation, for 3-shift operation every 2 weeks	Air service unit (filter regulator)	Pressure check, drain water separator	
	Pneumatic components	Leak test	
	Strap feed	Visual check of all deflection rollers for damaged edges, cuts and for smooth running	
Every 600 hours of operation, for 3-shift operation monthly	All rollers and guide rails	Clean and lubricate rollers and guide rails	
	Channel system	Visual check of all flaps for cuts, cracks or deformation which may impair the function of the channel flaps. Clean the strap running surfaces. Check all flaps for easy opening.	
	Linear bearings, roller bearings	Clean and lubricate	lithium saponified lubricant of consistency class NLGI 2 acc. to DIN 51818
	Chain drives	Clean and lubricate	low-viscosity lubricant NLGI 1-2 acc. to DIN 51818
	Gear wheels/ gear rods	Clean and lubricate	lithium saponified lubricant of consistency class NLGI 2 acc. to DIN 51818

Observe the maintenance instructions as well as the safety precautions of the component manufacturers.

Do not use any toxic coolants or lubricants with the machine.

During all phases of operation life any operating and display elements must be checked for permanently glare-free illumination. Remedy, if required.

Any signs and markings at the machine must be kept well-legible.

The operator company must ensure that the environmental conditions

6.3. Spare and wear parts

For the spare and wear parts to be used for the TITAN strapping machine please refer to the attached files (see chapter 8).

7. Decommissioning, dismantling, disposal

When decommissioning the machine the components must be material-sorted and disposed of according to the environmental standards. Observe national and international standards!
Disposal of any machine parts must comply with the local environmental regulations!

For disposal of auxiliary materials, working materials and consumables the requirements specified in the data- / safety data sheets must be fulfilled. These data sheets will be included by the suppliers of such materials.



Information!

Grease and lubricants or waste containing grease or lubricants represent considerable hazard to the environment. They must be disposed of according to the local environmental standards.



Caution! Danger to life!

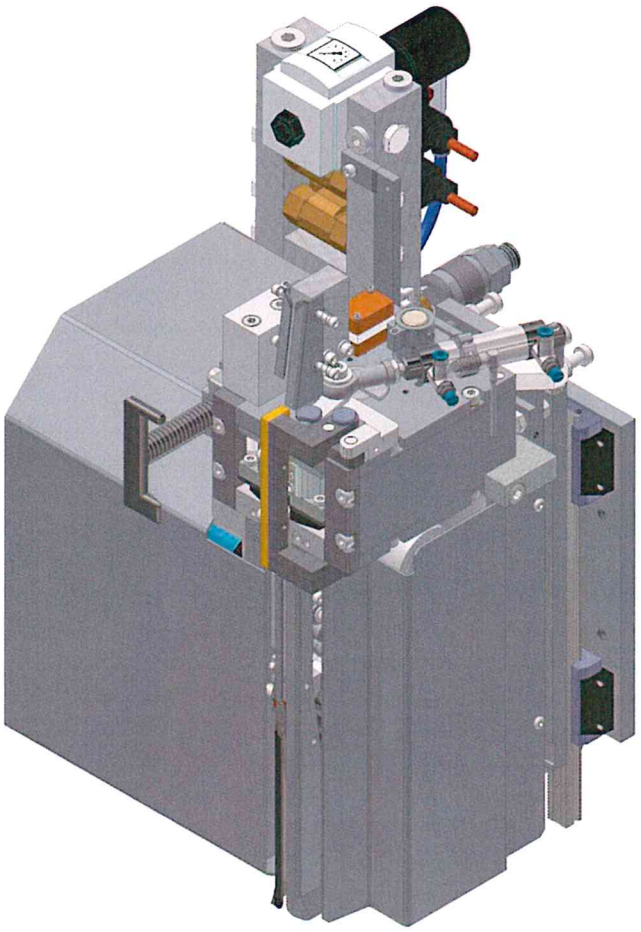
This machine is equipped with a lockable mains switch (acc. to VDE 0113) which is secured by a U-lock against inadmissible machine start. The operator / owner of the machine must ensure that the mains switch is secured by an adequate lock, that the key is in safekeeping and that authorized responsible persons only gain access to that key.
If required, the machine must be secured against inadmissible operation as described above.

8. List of annexes

1.	Operating and maintenance instructions strapping head VS11-L	B02_11DE14_13_0003
2.	Spare parts list strapping head VS11-L	E02_11EU28_13_0003
3.	Operating instructions ABS "strap dispenser unit"	B702DE07_11
4.	Spare parts list ABS "strap dispenser unit"	E702DE11_11
5.	Spare parts list ARS "strap dispenser"	E604DE11_11
6.	Spare parts list BSC "strap accumulator"	E615EU11_11
7.	Machine parts list	454X001879
8.	Machine drawings:	
	Layout drawing VS11-S	4549000758
	Assembly drawing VS11-S	4548000497
	Strap guide channel	4547001165
	Lance	4547001164
	Machine frame	4547001190
	Pneumatic diagram	4545000388
9.	Electric documentation	separate folder

Operating Instructions

-Translation of the original instructions-



VS 11-L

01 0003

Pneumatic strapping head for steel strap

Important!
The customer agrees to make these operating instructions understandable to all operating and service personnel.
Do not throw these operating instructions away.

TITAN
Wir halten zusammen

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1. Manufacturer details

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Pneumatic strapping head for steel strap "No-Seal-Joint"

2. General

Thank you very much for your confidence in the technology of TITAN Umreifungstechnik.

These operating and maintenance instructions are meant to facilitate how to become acquainted with the strapping machine and apply it as intended. The operating instructions comprise important information on how the strapping machine can be used safely, as intended und economically.

The operating instructions must permanently be available at the place the strapping head is used. They must be read and applied by all staff members working with the strapping head. Such works especially include operation, troubleshooting and maintenance. Adjustment and maintenance works may only be performed by trained technical staff.

Explanatory notes on the warning and instruction symbols:



Caution!
Used where there is danger to life and health.



Warning!
Used for danger which cause material damage.



Note!
Used for general information and information which if not followed can cause faults in the operating sequences.

The item numbers (...) and designations used in these operating instructions refer to the spare parts list or documentation on the electrical system.

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TITAN is a registered trademark of TITAN Umreifungstechnik GmbH & Co.KG.

- **Intended use**
  This strapping head is intended for installation in different strapping machines. The strapping head is meant for the strapping of slit coils, sheet packages, bricks, structural timber, bundles of sections etc.

- **Unintended use!**
  Strapping material must not be used for the hoisting of loads; this strapping head may only be used as intended and specified above.

- The strapping head **VS 11-L** meets the German and European safety requirements and complies with the provisions in the following **EU directives**:

  See declaration of incorporation.

- The **VS 11-L** connects modern drive and control technology with the state of the art in proven sealing technique without sleeves.

- Three pneumatic motors and three compressed air cylinders perform all strapping head functions.

- All functions are triggered by solenoid valves. The valves are equipped with actuating magnets 24 V DC (DC voltage).

- The mains voltage for the **VS11-L** must be 400 V 50 Hz.

- The seal of the **VS 11-L** has three punching's.

- The seal stability of the seal without sleeves is up to 85 % of the load at rupture of the strap (depending on strap quality and dimension).

- The gentle transport of strap is affected by means of large strap transporting rolls. The surface of the strap remains undamaged. Mangle rolls installed provide for a trouble-free strap circulation.

- Adjustable strap tensions ranging from 1500 N to10 000 N permit good adaptation of the strapping to the packing items.

- The strapping head is provided with an adjustable floating movement (movement forward of the head against the tensioning direction) permitting the strapping of the packing item without damage to the edges even at high strap tension.

- A slight tilting movement within the floating movement permits a good adaptation to the packing item without a loss of tension (the strapping head is drawn nearer to the packing item by means of the final tension).

- The mechanical connection of the strapping head with the machine is implemented on the locating surface of the floating movement by means of four M10 screws. Electricity and compressed air are provided with a detachable quick-acting coupling.
- After loosening the four screws and the disconnection of the electricity, gas and compressed air ports the head can be replaced quickly and without problems.

- The **VS 11-L** unit processes steel strap for packing items of the widths:

  13, 16, und **19** mm.

- Strap thickness can range from: **0.5** to **0.63** mm

- The compressed air used must be dewatered, filtered and oiled. The air pressure (flow pressure with transport motor being switched on) should be **5** bar.

- Maximum air flow rate 18 l / s.

- Air consumption per strapping operation approx. 0.1 to 0.2 m³ (depending on channel size).
  Air consumption per motor 1.1 m³ / minute.

- The cross section of the feed line port should not be below **G3/4"**.



Attention!
It is not possible to use plastic strap with those heads!

3. Safety regulations

The area in which strapping is carried out with steel strap is a danger zone and must be secured in accordance with DIN EN ISO 13857!



The user manual must be read prior to operations of the strapping head.
Read all instructions carefully.



Operations of the strapping head (machine) by unauthorized personnel are forbidden.



It is urgently required that all safety and warning notes are followed, we especially refer to the **EU Machine Directive**.



Testing in accordance with **EN 60204-1** must be performed on the strapping head "as installed".



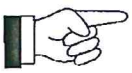
The operating staff must be instructed precisely and made familiar with the handling of the strapping head before operating the strapping head for the first time.



The strapping head may only be positioned and put in operation in closed and dry rooms.



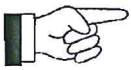
Operating the strapping head is appropriate in the temperature range 0°C to +40°C.



Do not deposit containers with liquids on the strapping head. No liquid must be allowed to penetrate the strapping head.



No persons or objects must stay in the area of operation of the strapping head before the latter is put in operation.



Protective installations, covers and linings of the strapping head must be checked before activation. They must neither be loose nor have been removed.



Do not let your hands get into the channel area and below the packing items during the strapping operation. **Attention! Risk of squeezing!**



Before the beginning of leaning works and/or troubleshooting the strapping head must be put out of operation.
Main switch at position OFF.



Attention! Strap may tear! Do not stand in the alignment of the strap.



Wear eye and face and hand protection when eliminating fault strapping.



When cutting the strap hold the upper parts firmly (see figure). **Attention!** The lower part of the strap jumps upward.



Consider the strong development of noise during longer operations. Therefore, protect your health.



Exclusively **use** original **TITAN spare parts only!** The use of spare parts not made by TITAN excludes guarantee adjustments and liability.



In automatic mode attention has to be paid that no squeezing points may occur between the feeding installations (e.g. roller conveyors) and the movable strapping unit.



We do not accept liability for alterations to the strapping machine! Further, warranty/guarantee and these operating instructions become inapplicable.

4. Life phases of the unit

Transport:



The transport of the strapping head has to be realized with an hoisting device.
Attention! Do not stay beneath the load during lifting and depositing. Order individuals which stands in the hazardous area to leave it. Minimum carrying capacities see technical data on p. 10.

Putting the unit in operation:



The strapping head may be put in operation by trained technical staff only.

Setting, programming:



Setting and programming works related to the strapping head may only be performed by trained technical staff.

Operation, modes:

Manual mode:
Manual mode permits the implementation of individual works performed for testing and troubleshooting. Further, manual mode is applied to take the strapping head to home position.



Attention!
During the touch control of the cam gear there is a risk of squeezing at the counter plate.

Automatic mode:
Automatic processing of all movements.



Attention!
In automatic mode attention must be paid that no points with the risk of squeezing may occur between the feed installations (e.g. roller conveyors) and the movable strapping head.

Cleaning, maintenance, repairs:



Just trained technical staff is allowed to perform maintenance and repair works on the strapping unit.



Attention! Before beginning with any maintenance work the relevant staff must disconnect the strapping head from the power mains.



Attention! Wear protective glasses when cleaning the head / machine with compressed air.

Putting the head out of operation, disassembly:



Attention!
When dismounting the strapping machine there is the risk of squeezing.



Attention!
Do not stay beneath the load during lifting and depositing. Order individuals which stands in the hazardous area to leave it.
Minimum carrying capacities see technical data p. 10.

Waste disposal:



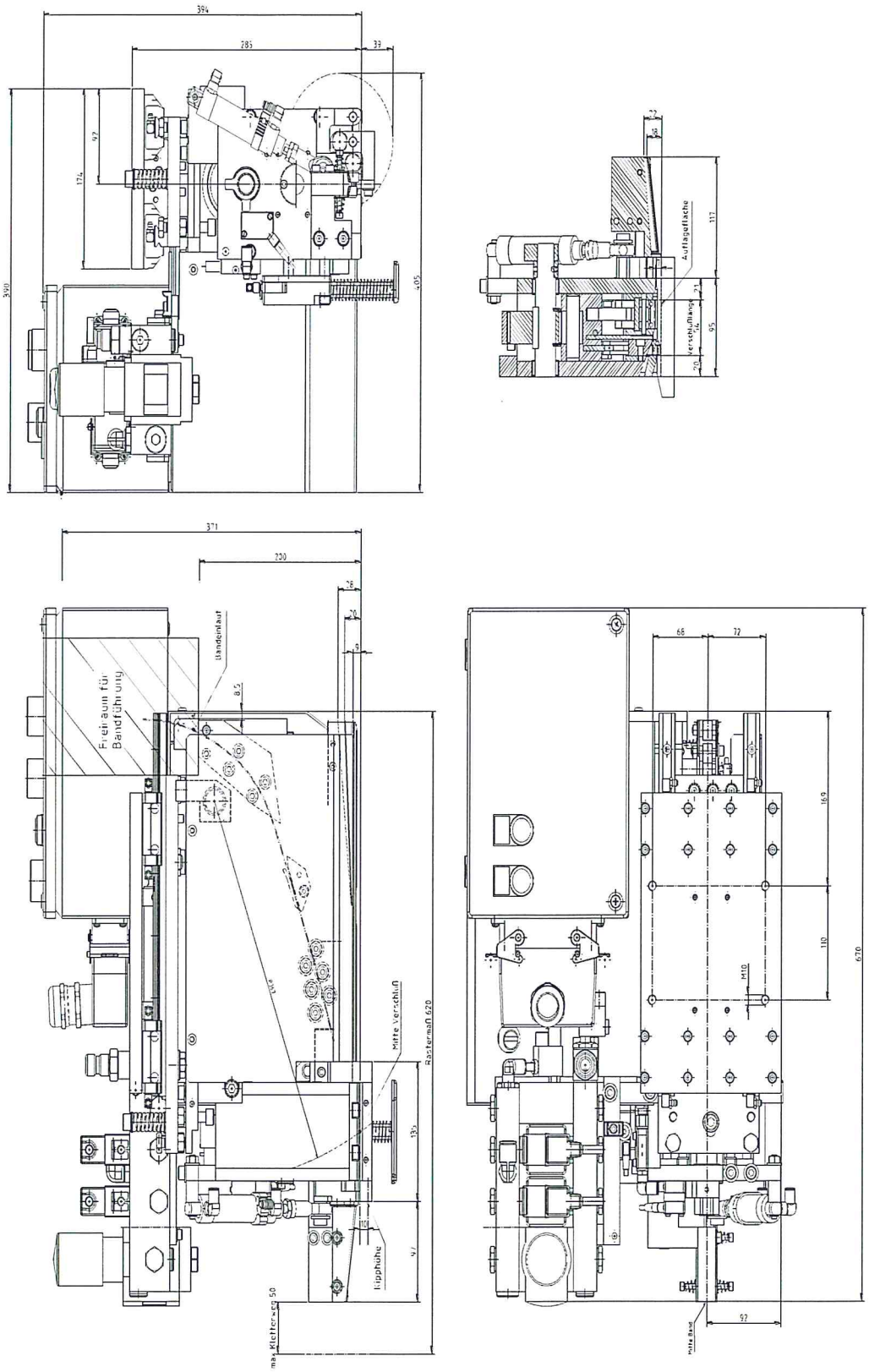
If packing material is to be disposed of, take it to the relevant recycling container or admit it to the Dual System.

Should the strapping machine have to be disposed of at the end of its service life, separate plastic material, steel and aluminium and dispose of such materials separately. In the same way, motors and electric modules like control system, switches and cables must be admitted to separate waste disposal. Take such elements to the appropriate waste management.

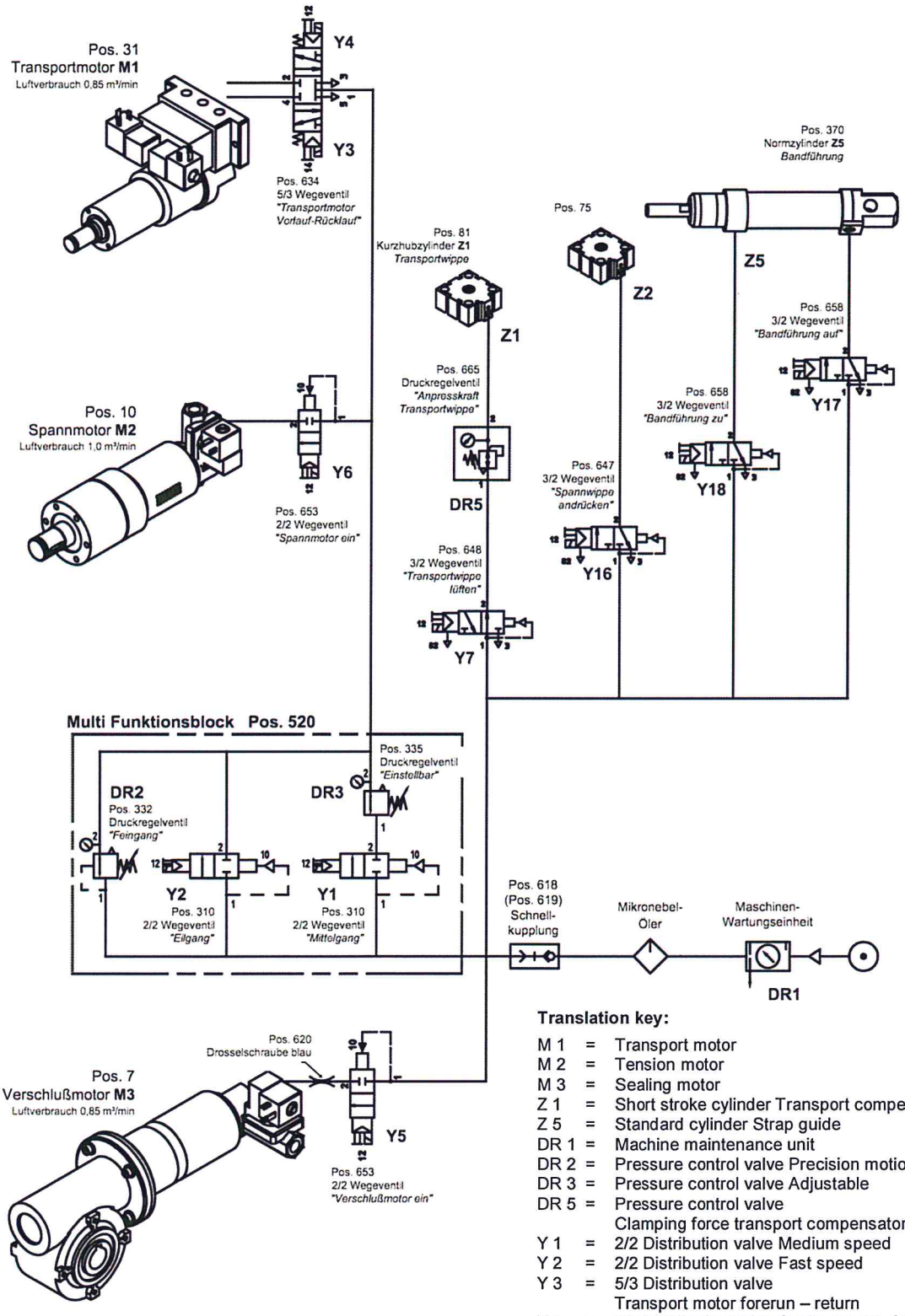
5. Technical data

Typ VS 11-L:	**incl. 3 punchings** for light straps of 13 x 0.5 to 19 x 0.63 mm Megaband
Kind of drive:	Electro-pneumatic, 3 motors and 3 cylinders
Strap transport speed:	approx. 2.2 m/s with strap thickness 0.5 mm approx. 2.0 m/s with strap thickness 0.63 mm
Strap tensions:	1,500 N to 10,000 N adjustable
Kind of seal:	without sleeve – triple punching
Rupture at load of seal:	approx. 75-85% of the rupture at load of strap (depending on strap quality and dimensions)
Weight:	120 kg
Noise emission:	The noise intensity level acc. to DIN 45635, part 27 is 85 dB (AS)
Air pressure:	max. 6 bar flow pressure
Air flow rate:	17 l / s
Air consumption:	approx. 0.1 to 0.2 m³ per strapping operation
Cross section of port:	G 3/4“
Dimensions:	700 x 400 x 600 mm (L x W x H)

5.1. Dimensions and assembly dimensions VS 11-L



5.2. Pneumatic equipment (head control)



Translation key:

M 1	=	Transport motor
M 2	=	Tension motor
M 3	=	Sealing motor
Z 1	=	Short stroke cylinder Transport compensator
Z 5	=	Standard cylinder Strap guide
DR 1	=	Machine maintenance unit
DR 2	=	Pressure control valve Precision motion
DR 3	=	Pressure control valve Adjustable
DR 5	=	Pressure control valve Clamping force transport compensator
Y 1	=	2/2 Distribution valve Medium speed
Y 2	=	2/2 Distribution valve Fast speed
Y 3	=	5/3 Distribution valve Transport motor forerun – return
Y 5	=	2/2 Distribution valve Sealing motor ON
Y 6	=	2/2 Distribution valve Tension motor ON
Y 7	=	3/2 Distribution valve Ventilation transport compensator
Y 16	=	3/2 Distribution valve Press on tension compensator
Y 17	=	3/2 Distribution valve Strap guide open
Y 18	=	3/2 Distribution valve Strap guide closed

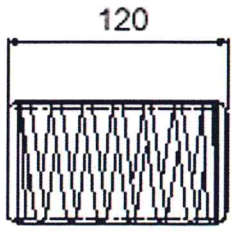
Schnellkupplung = Fast coupling
Mikronebel-Öler = Fine mist oiler
Drosselschraube blau = Throttle screw blue
Multi-Funktionsblock = multi-functional block

5.3. Strap

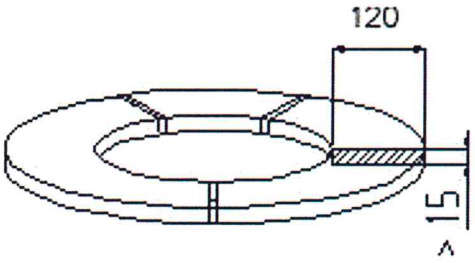
	Dimensions:	**3 punchings**		
⊖	Width:	13, 16, 19 mm		
⊖	Thickness:	0.5 – 0.63 mm		
	Quality:	**N/mm²**		**sealing strength**
⊖	Automaten:	800		≥ 75 %
⊖	Megaflex:	800		≥ 75 %
⊖	Mega:	1100		≥ 75 %
⊖	Niro:	1200		≥ 75 %
	Surface:			
⊖	Unpainted:	bright / blue		slightly coated with wax
⊖	Painted:	galvanized	or	painted with zinc powder

5.4. Smallest supporting surface with different packing items

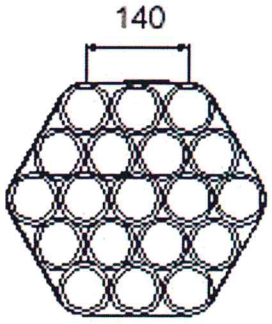
Expansive package
120 mm



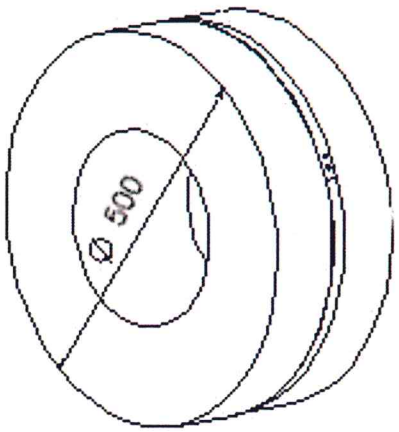
Slit coil
120 mm



Hexagonal pipe bundle
140 mm



Round packing item
Ø 500 mm



5.5. Calculating time (just functions of the head)

Example for **VS 11-L** cross section of strap 19 x 0.63 mm

F1	Strap feed	$= \frac{\text{Channellength}}{\text{Conveying speed}} = \frac{4.5\text{m}}{1.8\,\text{m/s}} + 1\text{s} =$	3.5 s
F2	Fixed time Clamping strap Strap guiding flap open	=	0.5 s
F3	Strap return	$= \frac{3.2\text{m}}{1.8\,\text{m/s}} =$	1.8 s
	Head forward	= e.g.	2.0 s
F4	Tensioning strap	$= \frac{50\text{mm}}{200\,\text{mm/s}} + 0.3\text{s} =$	0.55 s
F5	Fixed time Seal formation Cutting end of strap Releasing seal	=	1.5 s
F6	Head return	= e.g.	1.0 s
	To head before packing item B7 Swing in strap guide flap Fixed time		0.3 s

---

Total time: $\sum$ **11.15 s**

5.6. Air consumption VS 11-L

All compressed air motors consume the same amount of air.

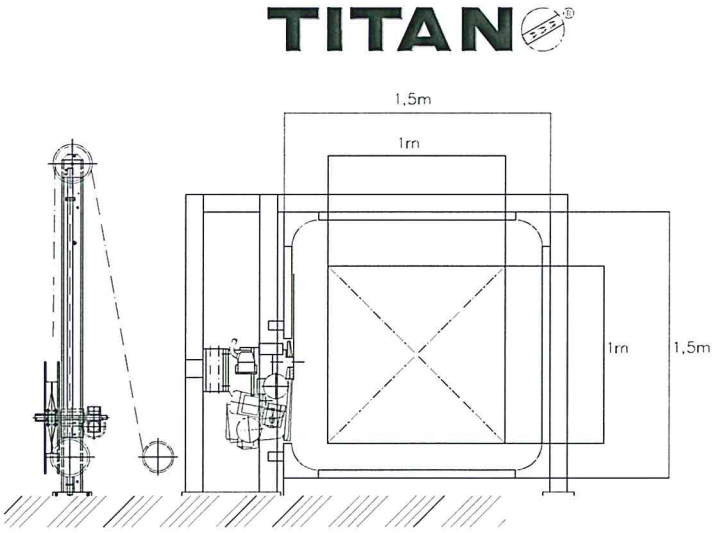
Consumption of compressed air 1.1 m³/min = 18 litres /s at 6 bar.

Cross section of port **R¾"**

- **Seal:** Sealing time 2.2 s = Air consumption **40** litres
- **Tensioning motor:** Tensioning time approx. 3.0 s = Air consumption **54** litres
- **Transport:** Select transport speed acc. to strap thickness (2.2 / 2.0 / 1.8 or 1.6 m/s)

Transport feed = $\frac{\text{Channel size in m}}{\text{Strap speed}}$ x 18 l

Transport return = $\frac{\text{Channel size in m}}{\text{Strap speed}}$ - Circumference of packing item x 18 l



Example:
Channel size 1.5 x 1.5 m = **6m**
Size of packing item 1.0 x 1.0 m = **4m**
Strap thickness 0.63 mm = **1.8 m /s** strap speed

$\frac{6\text{ m x }18\text{ l/s}}{1.8\text{ m/s}}$ = 60 l for channel feed

$\frac{6\text{ m} - 4\text{ m x }18\text{ l/s}}{1.8\text{ m/s}}$ = 20 l for transport return

Tensioning	54 L
Sealing	40 L
Transport	80 L
	174 l consumed standard air per strapping operation

6. Designations

6.1. Actuating magnets

Air valve throttled	Y 1	
Air valve unrestricted	Y 2	
Transport motor forward	Y 3	
Transport motor backward	Y 4	
Sealing motor	Y 5	
Tensioning motor	Y 6	
Transport slide	Y 7	
Head forward	Y 13	at the machine
Head backward	Y 14	at the machine
Tensioning slide pressed	Y 16	
Strap guiding flap open	Y 17	
Strap guiding flap closed	Y 18	

6.2. Limit switches

Strap Stop switch	B 1	
Counter switch	B 2	
0 position	B 3	
Position switch k	B 4	
Safety switch	B 6	
Head before packing item	B 7	
Head on packing item	B 8	
Service – switch insertion of strap	B 9	
Service – switch seal	B 10	
Floating package front	B 12	option
Floating package back	B 13	option
Start precision movement	B 14	(in the channel)
Head rear	B 15	
Head front	B 16	
Accumulator full	B 17	
Accumulator empty	B 18	
End of strap	B 19	

6.3. Motors

Transport motor	M 1	
Tensioning motor	M 2	can be attenuated
Sealing motor	M 3	

6.4. Cylinder

Transport slide	Z 1
Tensioning slide	Z 2
Strap guiding flap	Z 5

6.5. Pressure reducer

Main maintenance unit	Fast movement	Strap tension max.	DR 1
Multi-valve block	Precision movement	Strap tension min.	DR 2
Multi-valve block	Strap transport	Strap tension	DR 3
Valve bank	Strap transport	Transport slide	DR 5

6.6. Adjustments

Adjustments:	**Definition of term:**
Strap tension adjustable	$Y_1 - Y_2$
Pulses for aligning of strap (B2)	Pulses aligning of strap
t1 tensioning strap OFF	Tensioning OFF
t7 if B 14 not available	Starting precision movement
t9 control time strap stop	End strap feed

Monitoring operating time:

Feed / Return / Tensioning

6.7. Functions of switches

B1 Strap into head

Initiates the precise movement of the beginning of strap into the sealing unit for strap overlap.

B2 Counter switch

Monitors the contact between conveyor roll and strapping material and thus prevents any slipping of the conveyor roll.
Switches from return transport to tensioning.

B3 0-Position

Defines the 0-Position of the cam gear.

B4 Position switch K

Stops the cam gear at clamping position.

B6 Strap guide opened

Monitors the mechanically opened position of the strap guide flap.

B7 Head in front of packing item

Signals „head in front of packing item"
Switches the movement „Head in front of" of the machine to precise motion and following the release of the seal it activates the cam gear for movement to the 0-position.

B8 Head on packing item

Signals „Head on packing item", triggers the fast return transport of strap or strap tensioning.

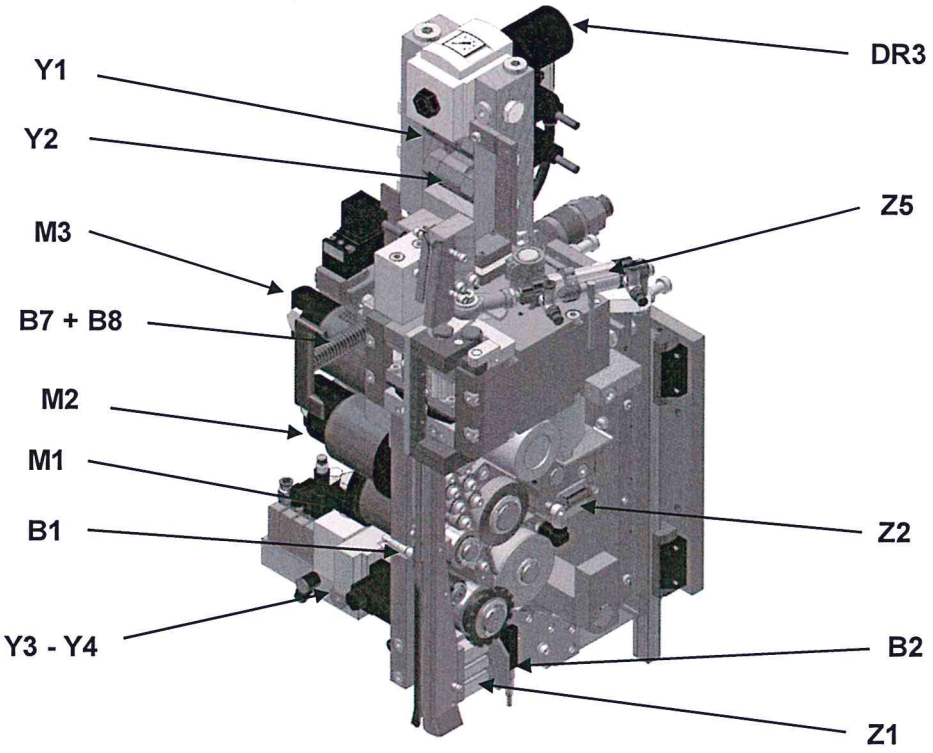
B9 Strap forward motion

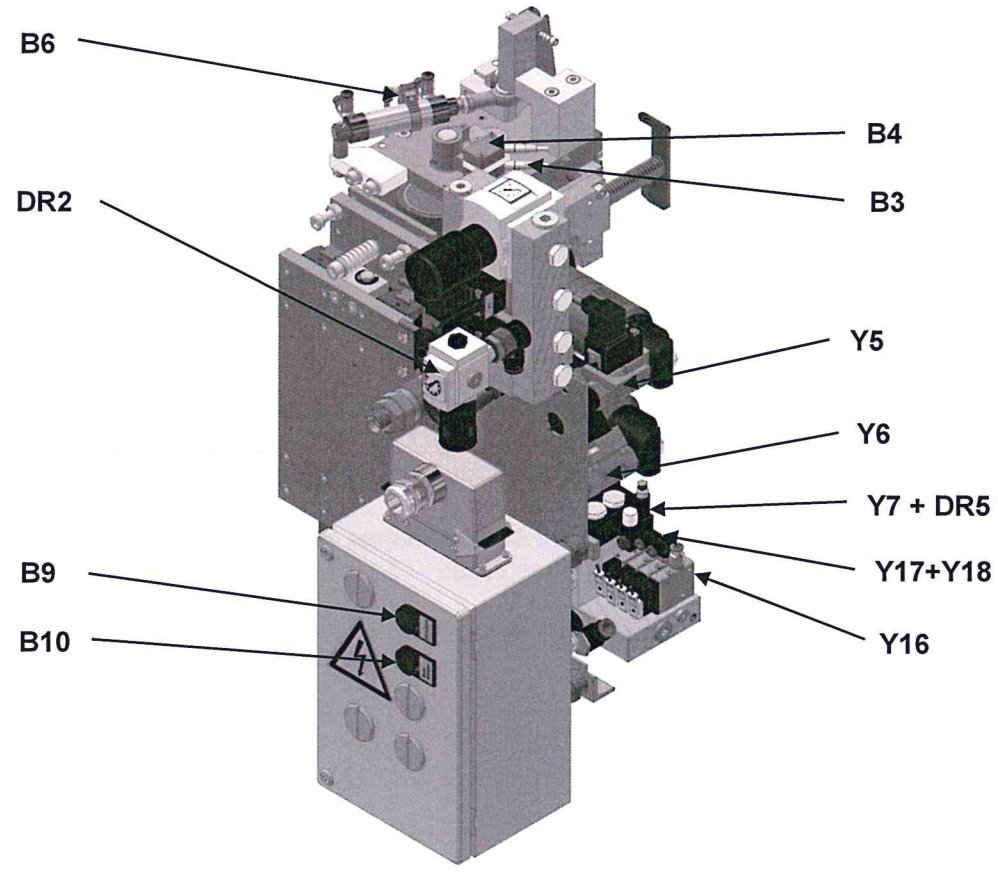
Permits the strap forward motion in manual mode to insert the strapping material.

B10 Seal

Permits the information of a seal in manual mode.

6.8. Position of the switches, valves, pressure controllers and motors

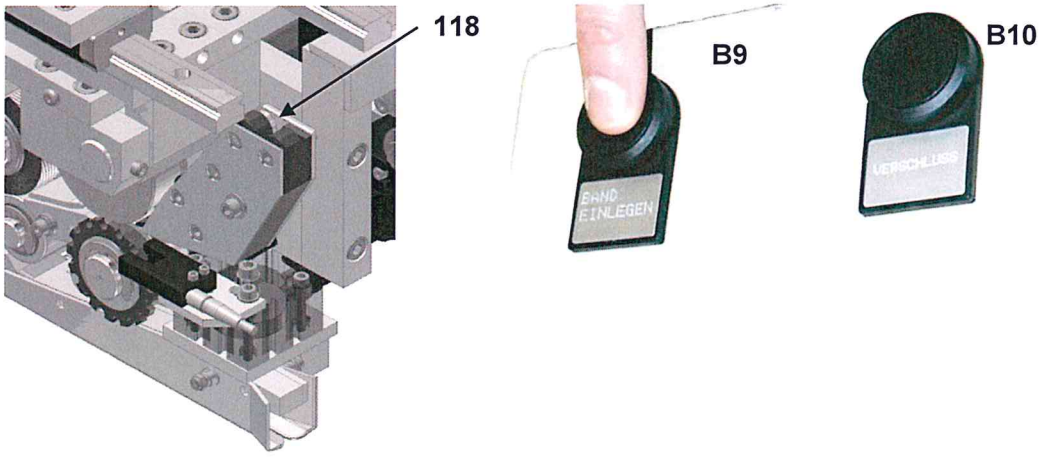




7. Functional description

7.1. Inserting the strap

Before the strap is inserted into the **TITAN strapping head VS 11-L** it must be assured that the end of the strap is with a clean, straight cut. Press switch **B9** and slip the beginning of the strap into insertion opening **118**.





Attention!
Wear gloves when inserting the strap!

7.2. Strap feed – fast speed

A **start signal** switches on the transport motor **M 1**, which drives the feed roll **42** feeding the strap at a speed of about 2.0 m/s through the strap channel until it reaches strap stop lever **B1**. A timer is started simultaneously (strap feed control) which interrupts strap transport if the maximum strap transport time is exceeded (strap breakage or obstructions in channel).

Strap feed can also be reduced under certain conditions (small channel etc.) by means of an early deactivation (with timer or switch) before the strap stop switch **B1** has been contacted in order to achieve constant, accurately repeatable strap feed.

Straps which are excessively bent can be pre-shaped with the integrated aligning device which provides for faultless strap feed.

For adjustments to the aligning device see section **4**, "Adjustments".

7.3. Strap feed – precision speed

After the strap stop switch **B1** has been contacted, a control time is started and the counter switch **B2** is activated. The transport motor **M 1** feeds the strap at reduced speed from the stop edge of the strap. Here, the counter disk **56** has the function of a **speed monitor**; when the latter comes to a standstill, no ON – OFF function takes place at **B2** and the transport motor **M 1** is disabled. If the strap swings I the channel after the stop of strap, the control time **t9** finishes the transport of strap. The beginning of the strap is now located in the sealing unit.

7.4. Closing strap clamp 1

After the standstill of the strap the sealing motor **M 3** runs from **0-position** to the **pos. K** and closes the clamps **415/416**
(0-position = eccentric at top position, key groove on top).
After 90° switch finger **879** occupies switch **B 4** = clamp closed.
Then, the beginning of strap is secured against retraction.

In most strapping operations that position is chosen as **stand-by position**. From that position the strapping head can be guided to the packing item. A tappet with two switches signals: "Head forward" precision movement **B 7** and "Head before packing item" **B 8**.

7.5. Return movement of strap

When the clamp is closed and switch **B4** has been activated, the transport motor **M 1** runs backwards and closes the strapping loop. At the same time the counter disk signals standstill of strap transport. A timer is started simultaneously (broken strap control), which interrupts the return movement of the strap after the maximum strap feed time has expired.

7.6. Lowering tensioning slide, tensioning the strap

After the standstill of transport motor **M 1** has been reached the tensioning motor **M 2** starts operations, lowers tensioning slide **20** with the running tensioning wheel **24** down onto the strap and tightens the strap around the packing item until the nominal value of the pressure reducing valve in the multiblock has been reached, minimum strap tension 1500 N, maximum strap tension 10,000 N.

7.7. Formation of a seal, cutting the end of strap, releasing the seal, aligning

After the strap tension required has been reached, the sealing motor **M 3** moves to **0-position.** The seal without sleeve is formed, the end of the strap is cut and the seal is released. Switch finger 879 activates switch **B3**.
With 0-position being reached the tensioning motor **M 2** starts operations and aligns the end of the strap by means of the aligning device being switched on (aligning length prespecified by pulses of the counter disk).

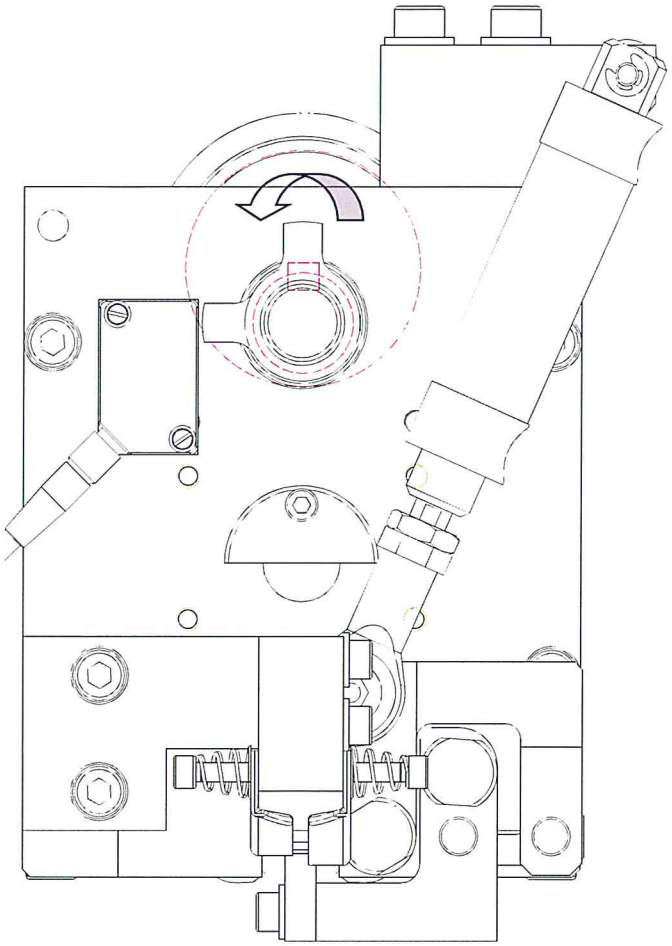
7.8. Head backward, closing of strap guiding flap

When the seal applies to the packing item, the strapping head can be returned to its initial position. After switch **B7** (head before packing item) has been activated, the strap guiding flap can be closed.
Switch **B 6** monitors the closing operation and does not permit a further working cycle when the sealing unit is still **opened**.
A new working cycle can begin.

7.9. 0–Position

Pos. K
Clamp closed
Beginning of strap secured against retraction.
Strap guiding flap opened,
Return transport of strap,
tensioning the strap.

0 – position
Strap guiding flap closed
Cutter and clamps lifted
Strap feed



7.10.Strap stop edge

The strapping head VS 11-L is provided with a strap stop edge.

On small packages (packages with a very short supporting surface) the strap overlap (sealed overlap) has to be as short as possible such that the entering part of the strap does not project over the edge of the package during the floating movement.
Thus, a strap stop edge can be made available to always position the entering part of the strap at the same point.

The strap stop edge is set such that a strap thickness fits between strap guidance **374** and cover plate right **355**. Then the lower strap will braked at the strap stop edge.

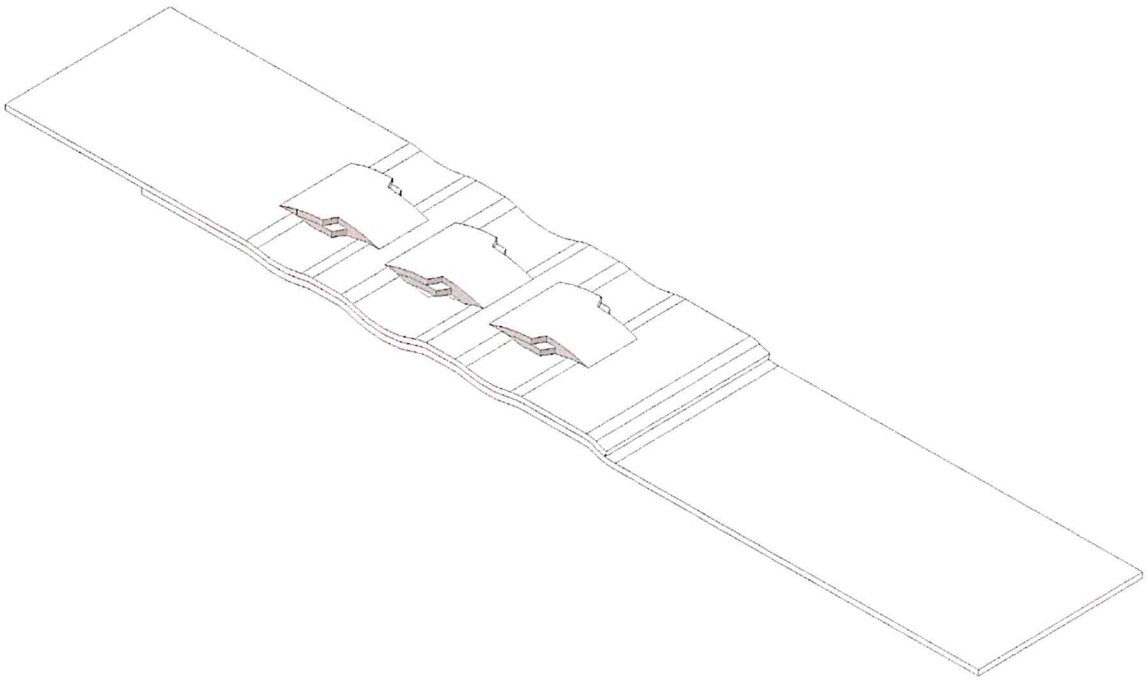
See settings.

7.11.Sealing

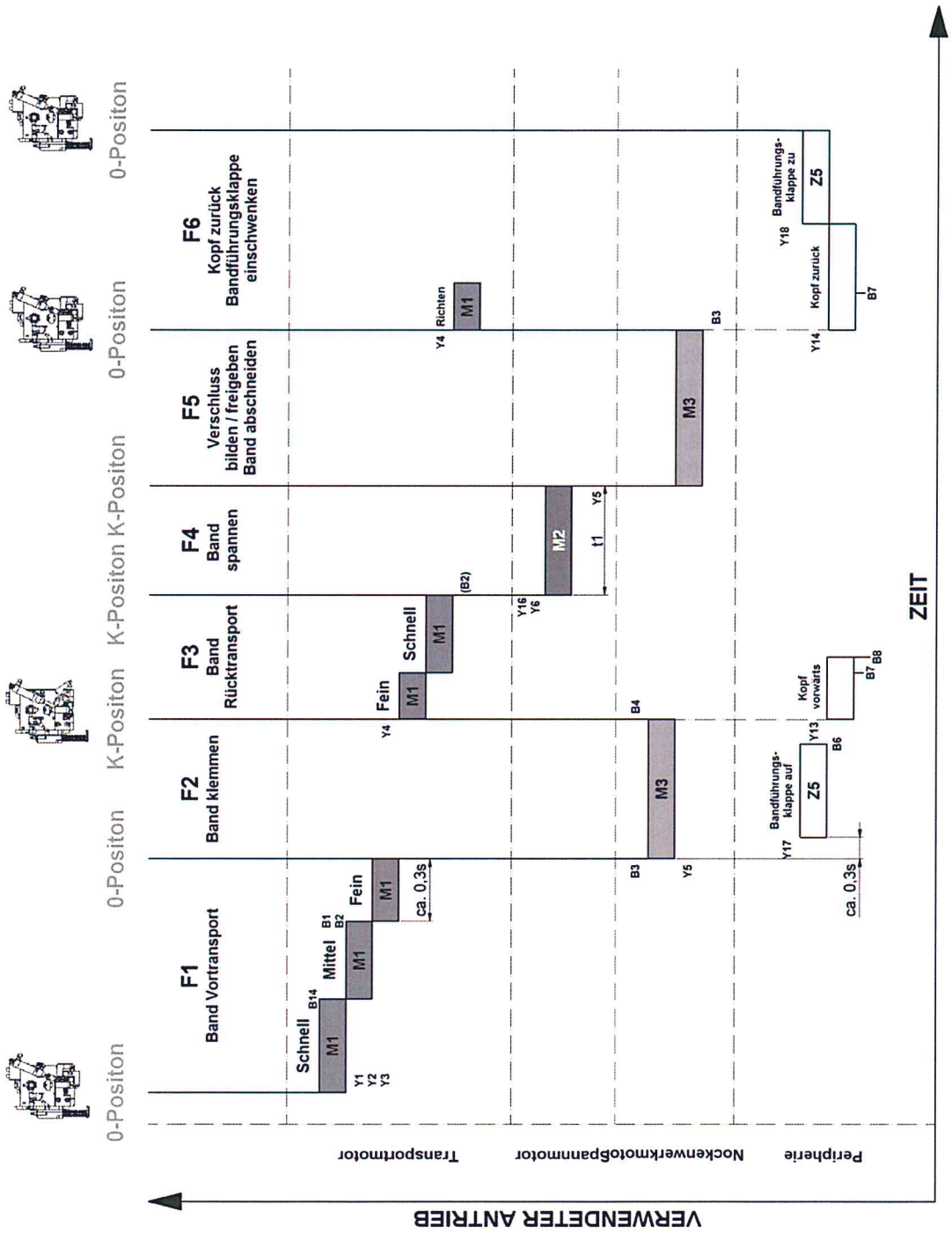
The following picture shows a correctly carved seal.

Check the seals regular:

- for even carved cuttings,
- for neat cutting edges,
- for that the lower run of strap is soaked in the cuttings,
- for correct adjustment of the cutter,
- for a sufficient overlap of the lower run of strap and
- for that the seal is placed in the centre of the strap.



7.12.Functional diagram



Translation key:
F1 Strap feed; **F2** Clamping strap; **F3** Strap return movement; **F4** Tensioning strap;
F5 Formation of seal / release seal, cutting of strap; **F6** Head retracted, swivelling in strap guiding flap.

Verwendeter Antrieb	=	Used drive	Zeit	=	Time
Peripherie	=	Circumference	Schnell	=	Fast
Nockenwerkmotor	=	Cam gear motor	Mittel	=	medium
Spannmotor	=	Tension motor	Fein	=	precision
Transportmotor	=	Transport motor	Richten	=	Align
Bandführungsklappe auf	=	Strap guiding flap opened	Kopf vorwärts	=	Head forward
Bandführungsklappe zu	=	Strap guiding flap closed	Kopf zurück	=	Head backward

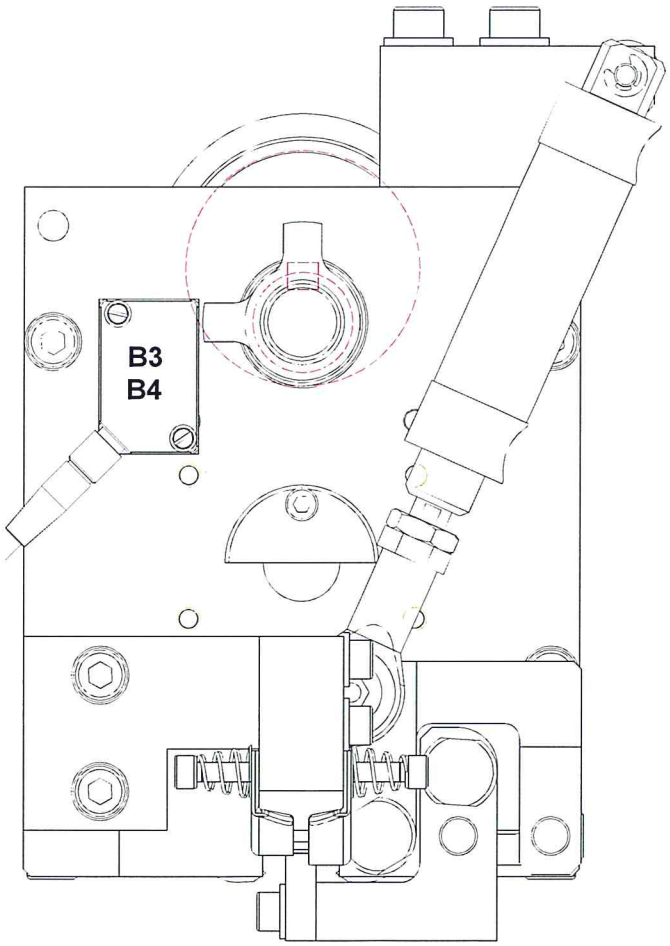
8. Settings

8.1. Setting the switches B 1 to B 8

All switches have fixed positions. Setting is not necessary.

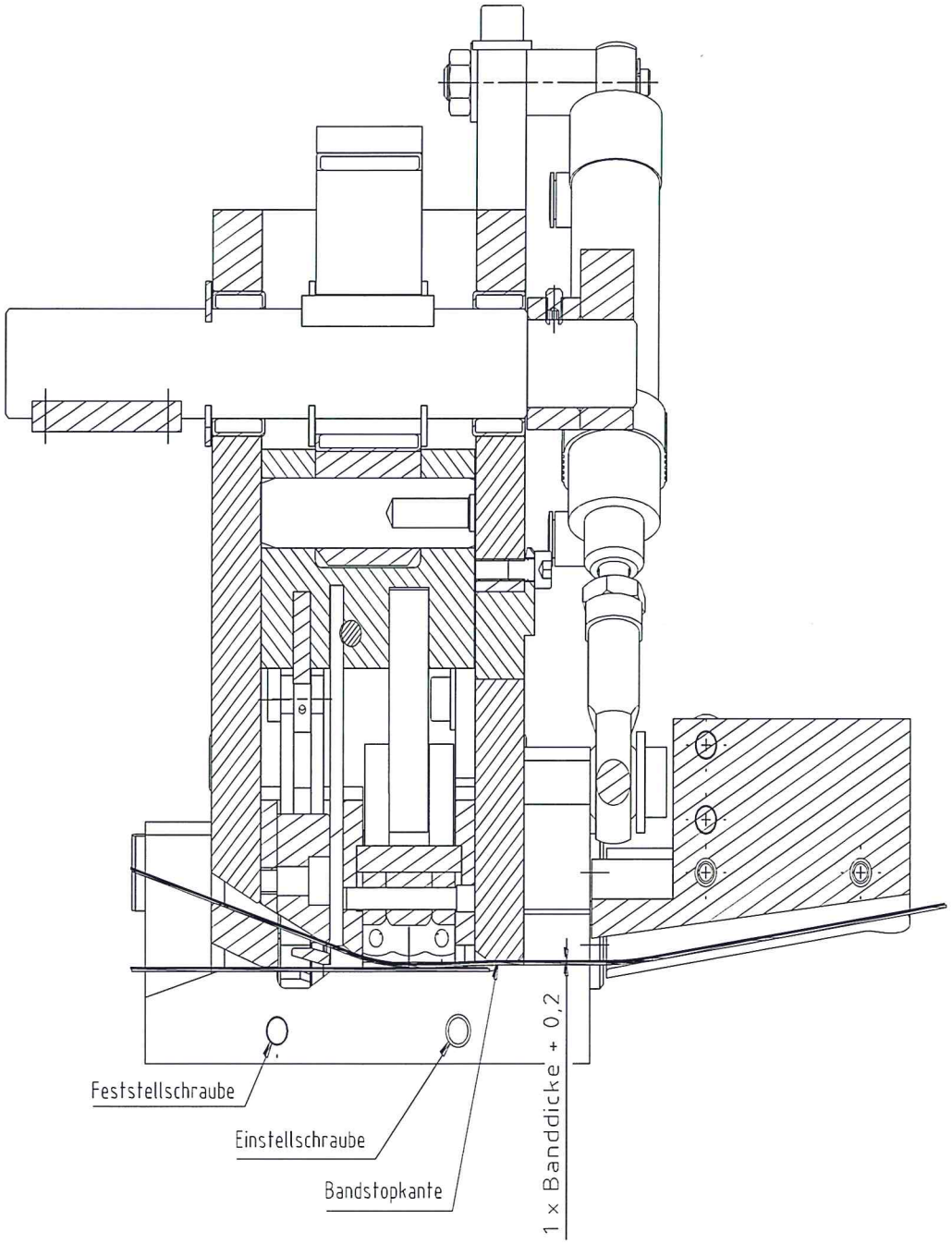
8.2. Setting the zero position

The zero position of the sealing unit is set such that the key groove of shaft **306** is vertical and the eccentric **309** is at its upper dead centre.
The switching surface of the switch finger **879** activates switch **B 3**, the locking screw of the jumper ring is positioned vertically then.
The position of the second switch finger for clamping position is at an offset of 90° to the **0-position.**
The locking screw is at horizontal position.
At clamping position the switch finger activates switch **B4.**



8.3. Setting the strap stop edge

The strap guidance is set such that the gap between strap guidance **374** and covering plate, right **355** is 1 strap thickness + **0.2 mm**.
Setting is performed at setting screw **375**; the locking screw is then used for fixation.



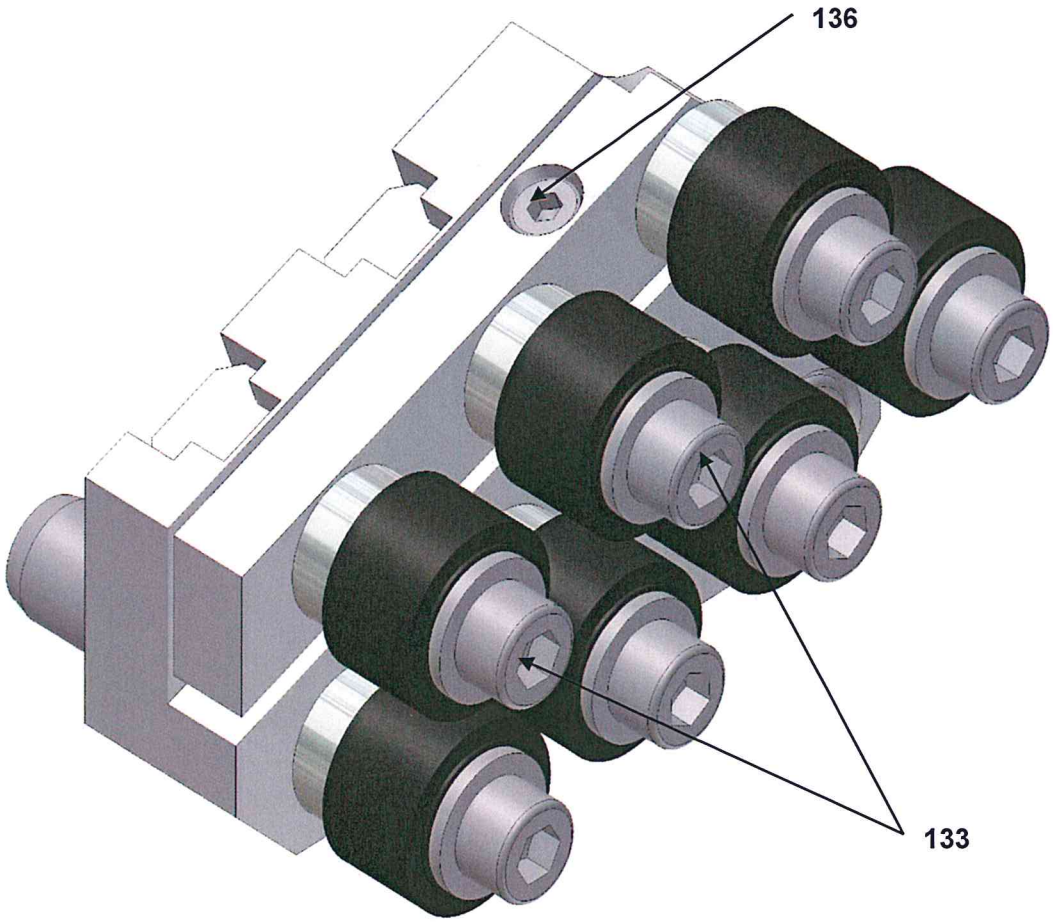
Key for figure below:

Feststellschraube	=	locking screw;	Einstellschraube	=	setting screw;
Bandstopkante	=	strap stop edge;	Banddicke	=	strap thickness

8.4. Setting the aligning rolls

The strapping material is permanently conveyed and directed by the aligning rolls.

Setting is implemented via the adjusting screw **(136)**. For that purpose, the two retaining screws **(133)** are loosened.
Turning the adjusting screw clockwise results in a higher aligning effect, turning it counter clockwise results in a lower aligning effect.
Upon termination of the setting the position of the upper aligning rolls is fixed by retaining screws.



8.5. Setting air pressure

Four pressure settings are required for the best result.

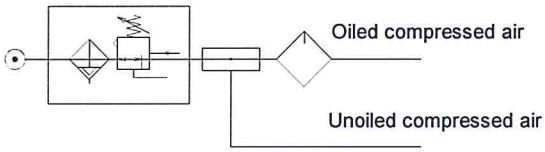
Pressure controller:

- **DR 1** Pressure controller on the machine (Main controller) ¾"
- **DR 2** Pressure controller on the multi-block
- **DR 3** Pressure controller in the multi-block
- **DR 5** Pressure controller for Clamping force transport compensator

1. The pressure controller **DR 1** is found on the maintenance unit of the machine.

The maintenance unit provides for the quality of the compressed air. It filters water, oil aerosols as well as dirt and rust particles out of the air and provides the entire machine with sufficient air pressure. It should be able to discharge oiled and unoiled air.

In case of high level differences between the maintenance unit and the strapping head or a hose length of more than 5 m a separate oiler must be installed near the head.



If the machine is without air supply, the maintenance unit must be installed either directly on the head or as near as possible near the head (depending on the installation position of the head).

- **Cross section of port:** **3/4"**
- **Air pressure:** **6 bar flow pressure**
- **DR 1** is set to **5.5–6.5** bar.

Effects of that setting on the strapping head:

- The pressure set results in **maximum strap tension** and **fastest strap transport speed**

Activation via unrestricted valve **Y2** in the multi-block and corresponding consumer valve **Y3** to **Y8** and **Y16, Y17, Y18.**

2. The pressure controller **DR 2** is found at the multi-functional block. It is set to 1.5 to 2 bar, readable on its pressure gauge.

The set pressure leads to the **minimum** strap tension and feed speed.

Selection directly **via** consumer valve, **Y3**, **Y4**, **Y6.**

Main functions:

a) Pulse counting precise movement
b.) Slow partial strap feed
c.) Slow strap return during movement of head
„Head on packing item"

3. The pressure controller **DR 3** is found at the multi-functional block. It is used for setting the strap tension between minimum and maximum.

Selected via valve **Y1** in the multi-functional block and the corresponding consumer valve **Y6.**

The main function is the setting of the strap tension.

The pressure is set at the pressure regulation valve, at valve **Y1**, and read at its pressure gauge. The valve can be activated manually or via the control.

4. The pressure controller **DR 5** is needed for the contact pressure force of the counter-roll against the conveying roll.

Depending on the kind and quality of strap the contact pressure force between conveying roll and counter-roll is set by the pressure control valve **DR 5**.

It has to be set such that the strapping material neither penetrates the layer of the conveying roll too strongly nor that slipping of the conveying roll results from the setting.

9. Maintenance

9.1. General

- The permanent readiness for operation of the strapping head type **VS 11-L** is achieved by regular and careful maintenance.
- Always keep the strapping head clean.
- Keep polluting particles and foreign substances away from strap guidance and the sealing area.



Attention!
All parts must be checked at regular intervals and replaced if worn. Parts worn out impair sealing stability and affect the transport security of the packing item.



Disregarding this note can result in faults and injuries.



Use **original TITAN spare parts** only!
The use of parts not being TITAN spare parts excludes warranty claims and liability.

Tool inspection!

Perform a **daily** visual inspection of the outside of the unit. The early detection of damaged parts extends the life of the unit. Replace all damaged parts **immediately** with **Original TITAN spare parts**.

9.2. Maintenance intervals

Sealing unit:

- Before the beginning of a shift: assessment of the seal without sleeve.
  All cuts must be fully available and undamaged.
- Weekly inspection of the clamps and all cutters.
- Every three weeks inspection of the entire assembly including dismounting, cleaning and lubrication.

Transport element:

- Weekly inspection of the tensioning idler indentation.
- Every three weeks inspection of the entire assembly including dismounting and cleaning.

9.3. Lubrication points

- All bearings installed are provided with long-time lubrications which requires renewal just once a year.
- All sliding surfaces of the sealing unit must be lubricated.
- **The following greases can be used:**

Shell	Retinax AM
Mobilgrease	Special
DEA	Molytex Grease EP 2
Esso	Mehrzweckfett
Aral	Mehrzweckfett F

Important!
This head may only be operated in conjunction with a compressed air maintenance unit comprising: pressure reducer, water separator and oiler. It cleans the compressed air, removes condensation water and permanently supplies the motors with the amounts of oil required. A screwdriver is used to set the oiler on the upper side such that a drop of oil falls downward in the sight glass during each strapping. Turning cw results in less oil, turning ccw in more oil.



Attention!
In no case must the strapping head be operated without oil in the oiler, since the immediate consequence would be the destruction of the compressed air motors!

During the entire operation the compressed air motors must be operated with filtered and oiled compressed air. As to the amount approx. 3 to 5 drops are required per 1 m³ air, this corresponds to 0.12 to 0.2 g/m³. Unalloyed mineral oil is the lubricating oil to be considered in first place. It must be of low viscosity and without resin or acid. Viscosity of 2 to 4°E at 50 °C (12-30 cSt) suited well (for other temperature ranges see viscosity table). Motor temperatures ranging from -30 to +100 °C are admissible. In case of ambient temperatures of less than +5 °C, however, there is the risk of icing. In that case dried air or appropriate ice-inhibiting lubricants (e.g. "Killfrost Anti Eis") are recommended.



Caution!
Wear breathing equipment when using antifreeze agents.

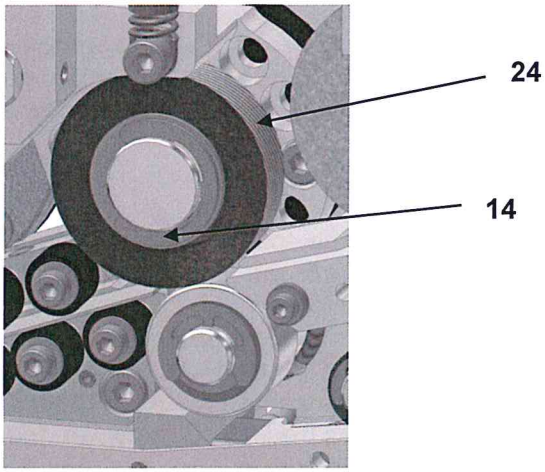
The following oils can be used:

Esso	D 32	-10	bis	+30°C
	D 100	+25	bis	+55°C
	CL 320	+45	bis	+75°C
DEA	Aries 32	-25	bis	+20°C
	Aries 100	0	bis	+50°C
Shell	Tonna Oel R32	-10	bis	+30°C
	Tonna Oel R100	+25	bis	+55°C
Mobil	Almo 525	-20	bis	+20°C
	Almo 527	0	bis	+30°C
	Almo 528		über	+15°C

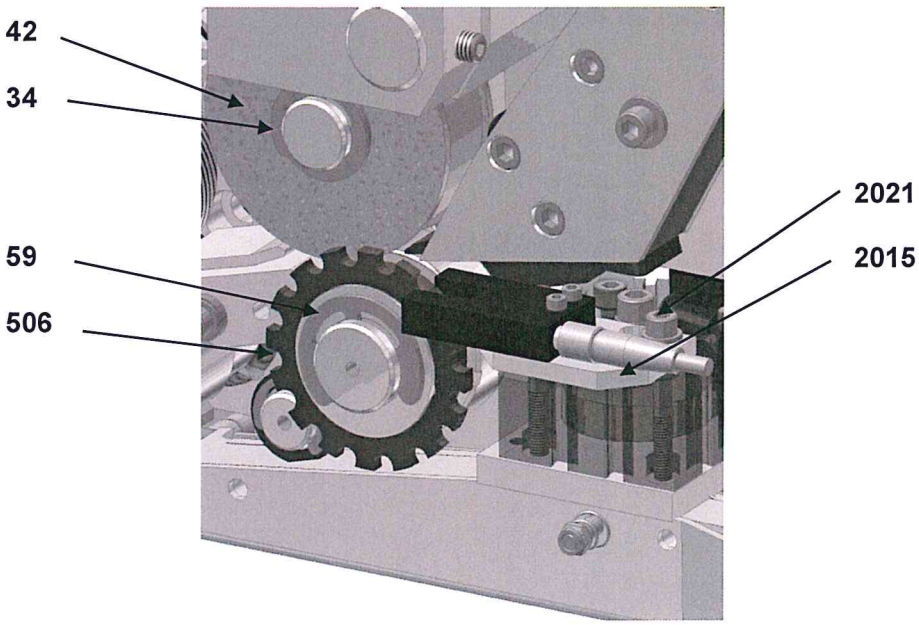
9.4. Maintenance transport unit

- The maintenance of the transport unit should be performed at three-week intervals.

- To main idler **24** remove safety disk **14** and pull off the idler including supporting disk to the front. Use a wire brush to clean the idler by removing paint and wax residues. Following that, apply grease to the motor shaft and slip on the idler including supporting disk again. Plug in the safety disk again.



- Loosen the fastening screws **2021** and push the light barrier holding device **2015** away from the counting disk. Remove safety disk **59** and pull off counter disk **506** including axial disk to the front. Remove safety disk **34** and pull off transport roll including supporting disk to the front. Clean Vulkollan coat and check it for damage. Apply grease to the motor shaft and slip on the transport roll including supporting disk again. Plug on the safety disk. Push back the light barrier holder and ensure that the counter disc and counter-roll can move freely. Following that tighten the fastening screws.



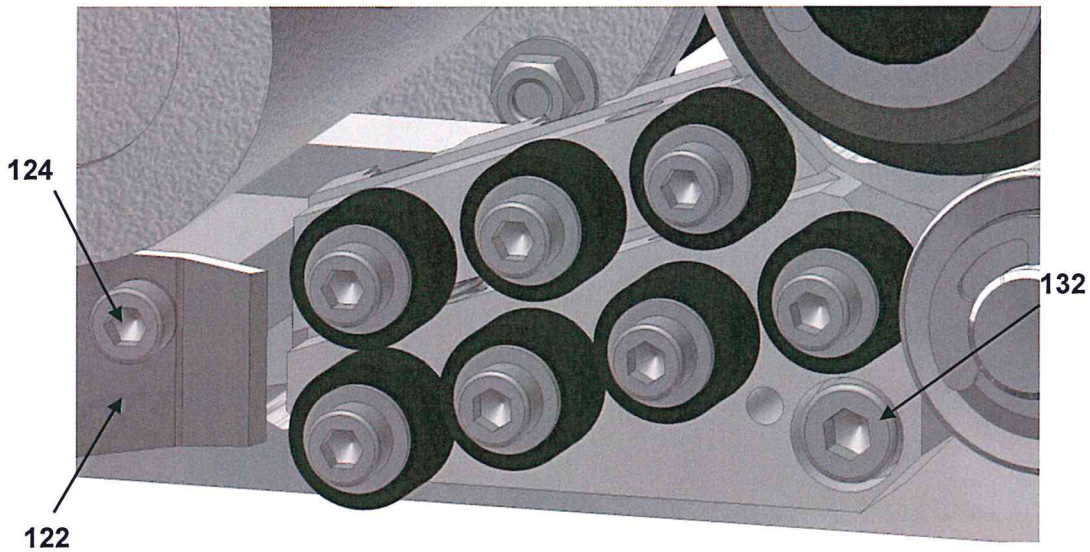
9.5. Maintenance of the aligning device.

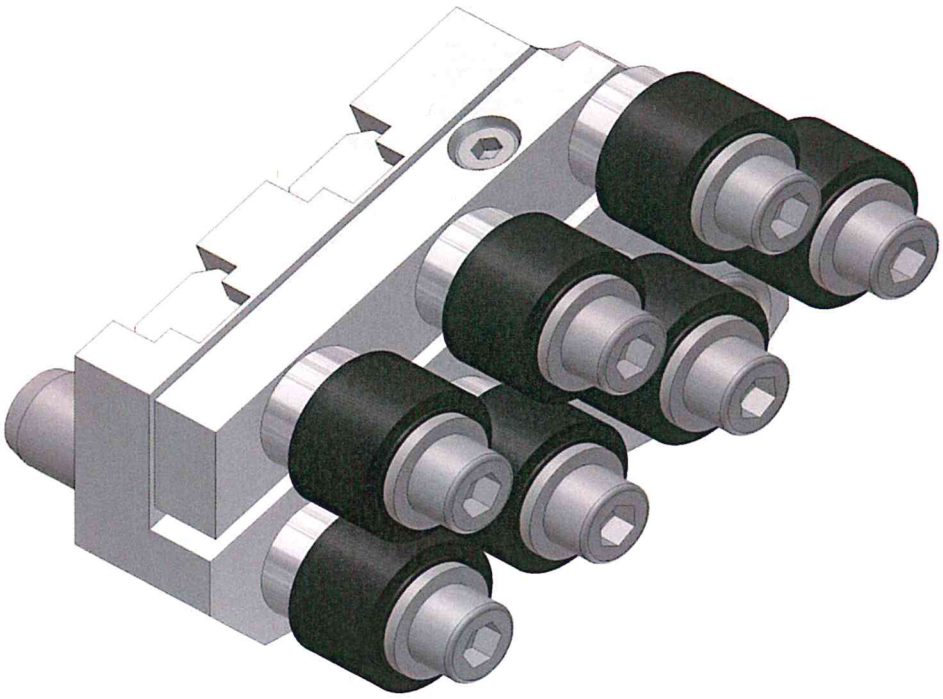
- Loosen cheese-head screws **124** and dismount them together with the lateral guide **122**.
- Loosen cheese-head screw **132** and pull off the complete aligning device forward.
- Use compressed air for the cleaning of the aligning device!



Attention!
When air-cleaning the unit by means of compressed air the worker must wear protective glasses.

- Putt he aligning device back into the strapping head and insert fastening screw.



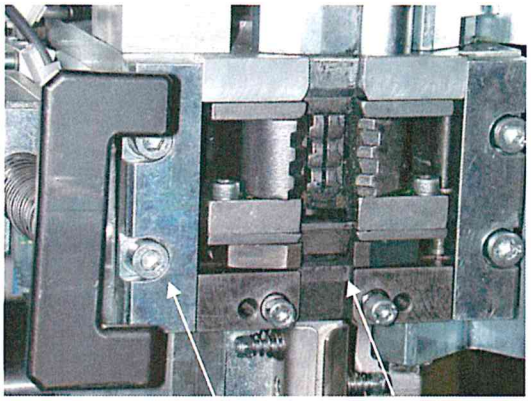


9.6. Maintenance cutter package

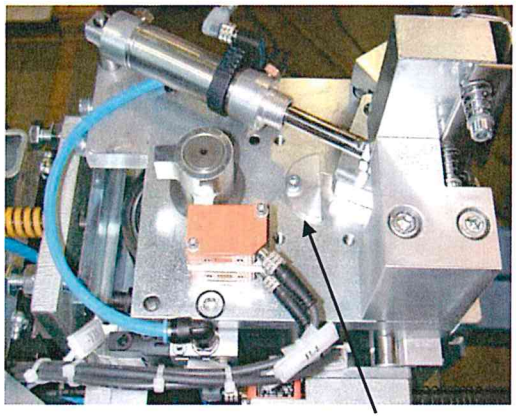
- During the check and maintenance of the cutter package special attention must be paid to the clamping edges of the clamps **415 + 416**, the cutting edge of cutter **413** and the cutting edges of the upper and lower cutters. Worn-out clamping edges cause the slipping-through of the strap during the tensioning operation. The cutting edges should be undamaged and sharp. Blunt and notchy cutting edges cause a strong formation of burr when notching and cutting.

- **For disassembly proceed as follows:**
  Move the sealing unit to the lower position (tongs closed). Detach the fastening screws of strips **303** and clamping guidance **1041/1042/1043**. Remove strips and clamping guidance. Detach fastening screw of the cover **372** remove cover. Use an M6 bolt to pull the connecting pin **312** through the cover hole. Then the cutter package can be drawn to the front out of the sealing unit.

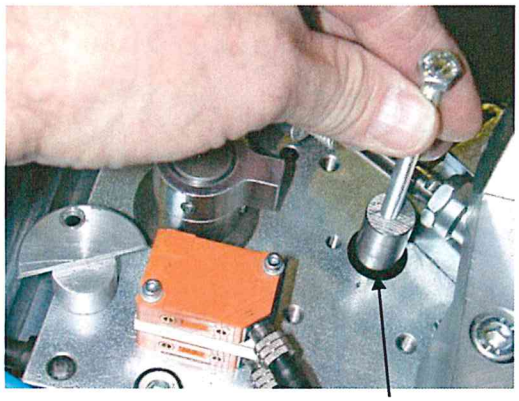
- **Assembly is performed in reverse order.**



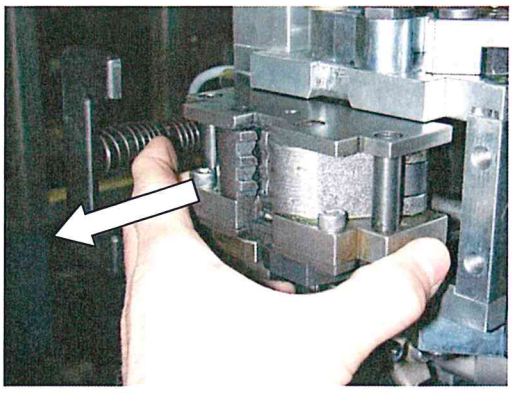
303 **1041/1042/1043**



372

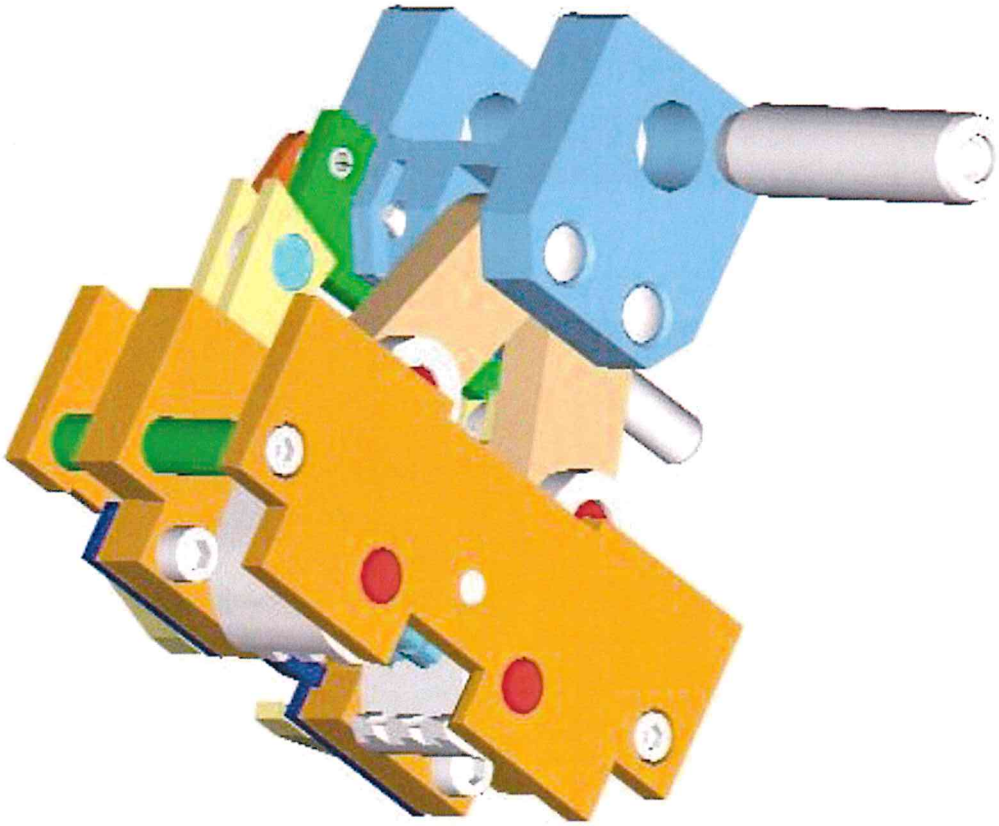


312



Cutter package unit:

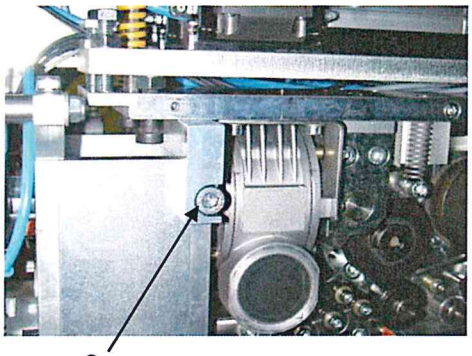
- The cutter package unit is mounted and screwed completely.
- It comprises the cut groups: notching, cutting and clamping.
- To keep times for change-overs and repairs short it is therefore recommended to order a spare cutter package.
- To achieve constant quality and life of the cutter packages it is recommended to send worn packages to Titan for repair or replacement.



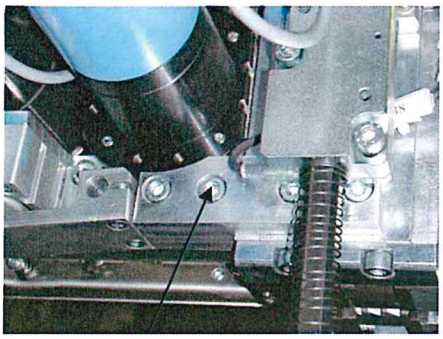
9.7. Dismounting and mounting the sealing unit

- To dismount the sealing unit it is required that all plug contacts of the switches **B3, B4, B6** and the head disable **513** are unscrewed.

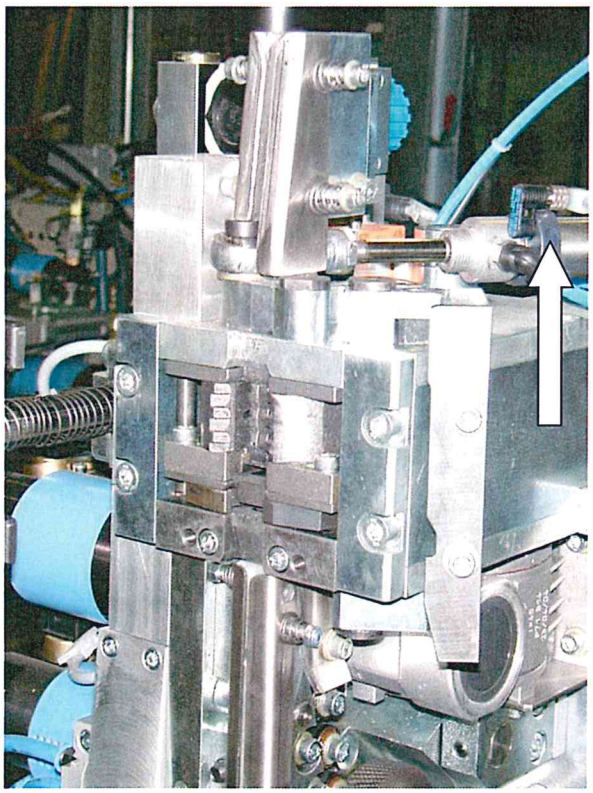
- Loosen the 2 fastenings crews of link **347** and the fastening screw of link **9**. The sealing unit can then be remove upwards from worm unit 2 and replaced with a replacing sealing unit or repaired.



9



347



10. Search for faults – troubleshooting

Fault	Cause	Remedy
Strap not fed into strap channel system.	There is no strap between rollers **42 and 62.**	Re-insert strap.
	Sealing unit not at zero position.	Reset to zero position.
	The strap guiding flap is open. The safety switch **B6** is activated.	Restore zero position or eliminate the jam.
The strap does not reach the strap stop switch **B1.**	Offset at the channel transition points (bordering)	Align transitory points.
The strap does not reach the sealing section.	0-position is not correct. The tongs are already closed.	Re-adjust 0-position.
Strap overlap too long / too short.	Not enough count pulses.	Increase number of pulses.
	Too many count pulses.	Reduce number of pulses.
	Counter switch defective	Check counter switch.
Change-over pulse from feed to tensioning does not come.	Counter switch	Check counter switch.
Strap tension too low.	Idler **24** slips.	Replace idler.
Strap breaks during tensioning at clamping edge.	Strap tension chosen too high.	Reduce tension via pressure controller **DR 3**.
Strap not cut off.	Cutting blade is blunt, the counter cutter is defective.	Cut off strap manually. Provide for 0-position. Replace cutter or counter cutter.
The head is not released from the packing item.	Cutter is broken.	Manually cut off strap. Move head to initial position. Repair of the cutter.

11. Declaration of incorporation

Declaration of incorporation of partly completed machinery

in terms of the directive 2006/42/EC on machinery, Annex II B

The manufacturer

TITAN Umreifungstechnik GmbH & Co.KG
Berliner Straße 51-55

58332 Schwelm

herewith declares that the pneumatic strapping head for steel strap described below

Type designation: VS 11-L
Serial number: 01 0003

corresponds to the essential requirements of the following directives (the requirements of which have been fulfilled, see annex), as far as is possible within the scope of this delivery:

Directive 2006/42/EC on machinery
Directive 2004/108/EC relating to EMC

Used harmonised standards, published in the official journal of the EU:

EN ISO 12100-1: 2004,	Safety of machinery – Basic concepts, general principles for design – Part 1: Basic terminology, methodology
EN ISO 12100-2: 2004,	Safety of machinery – Basic concepts, general principles for design – Part 2: Technical principles and specifications
EN 1010-1:2005	Safety of machinery – Safety requirements for the design and construction of printing and paper processing machines – Part 1: General requirements (Final concept 02/2003)
EN 1010-3:2002,	Safety of machinery - Safety requirements for the design and construction of printing and paper processing machines – Part 3: Cutting machines
EN 60204-1:2007,	Safety of machinery – Electrical equipment of machines – Part 1: General requirements

Furthermore the manufacturer declares, that the technical documentation for this partly completed machinery is compiled in accordance with part B of Annex VII and undertakes to transmit, in response to a reasoned request by the national authorities, the relevant information of the partly completed machinery in digital form.

This partly completed machinery must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of this directive and for which an EC declaration of conformity of the machinery in accordance with part A Annex II has been published.

Authorized representative for the compilation of the technical documentation:

TITAN Umreifungstechnik GmbH & Co. KG
Berliner Strasse 51-55
58332 Schwelm

Schwelm, the 16.07.2010

Peter Wilhelm Lenzen jr.
President

Annex

Requirements of Annex I from the directive 2006/42/EC which are fulfilled. The numbers relate to the parts of Annex I:

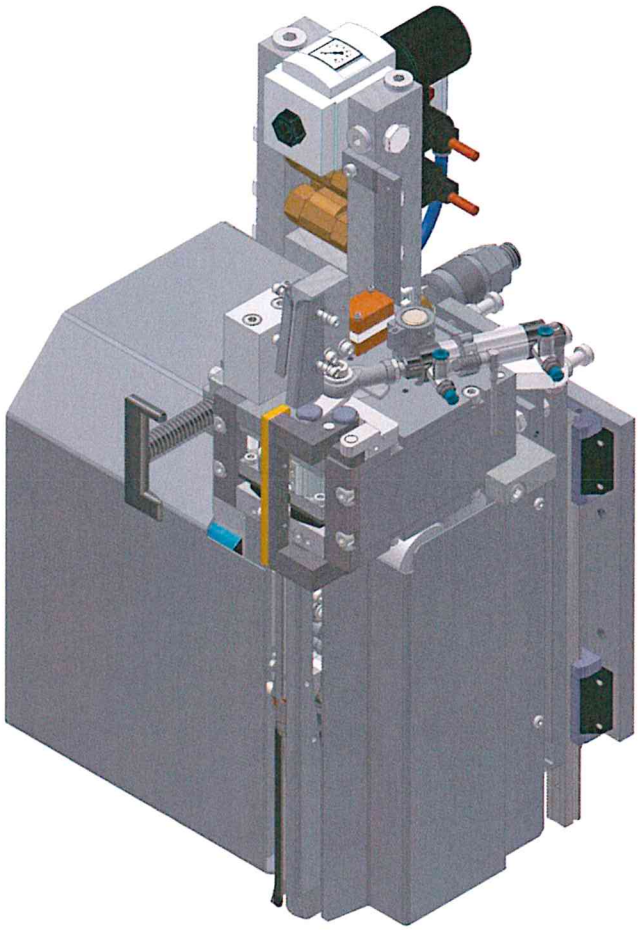
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Das TITAN Gesamtprogramm	The TITAN range of products	La gamme de produits TITAN
Umreifungsgeräte für Stahl- und Kunststoffband	**Strapping tools** for steel and plastic strap	**Appareils de cerclage** pour feuillard d'acier et plastique
Umreifungsmaschinen und Aggregate für Stahl- und Kunststoffband	**Strapping machines and aggregates** for steel and plastic strap	**Machines et têtes de cerclage** Pour feuillard d'acier et plastique
Ballenumreifungssysteme für Stahl- und Kunststoffband	**Baling systems** for steel and plastic strap	**Systèmes de cerclage de balles** Pour feuillard d'acier et plastique
Crimpsysteme	**Crimp systems**	**Systèmes crimp**
Stanzverbinder	**Strip joining devices**	**Système d'agrafage de bobines**
Verpackungsband aus Stahl- und Kunststoffband	**Strapping** Steel and plastic strap	**Feuillard d'emballage** Acier et plastique
Verschlusshülsen	**Seals**	**Chapes**
Zubehör	**Accessories**	**Accessoires**
		TITAN Umreifungstechnik GmbH & Co. KG Postfach 440, 58317 Schwelm Berliner Straße 51-55, 58332 Schwelm Telefon: +49 (0) 23 36 / 8 08-0 Telefax: +49 (0) 23 36 / 8 08-208 E-Mail: info@titan-schwelm.de www.titan-schwelm.de **Technische Änderungen vorbehalten** **Subject to technical alterations** **Sous réserve de modifications techniques**

Ersatzteilliste

Spare parts list

Liste des pièces de rechange



VS 11-L

01 0003

Pneumatischer Umreifungskopf für Stahlband, Hülsenlosverschluss

Pneumatical Strapping head for steel strap seelless joint

Tête pneumatique de cerclage pour feuillard d'acier fermeture sans chape

TITAN®
Wir halten zusammen

E 02-11 EU 28/13

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Hinweise zur Ersatzteilbestellung
Information on how to order spare parts
Remarques pour la commande de pieces de rechange

- Bitte geben Sie zur Bestellung von Ersatzteilen die Bestellnummer an, bitte benutzen Sie das **Bestellformular am Ende dieser Ersatzteilliste.**

- When ordering spare parts please indicate the order number, please use the **order form at the end of this spare parts list.**

- Pour commander des pièces de rechange veuillez indiquer le numéro de commande, vous trouverez à la fin de cette **liste de pièces de rechange un formulaire de commande.**







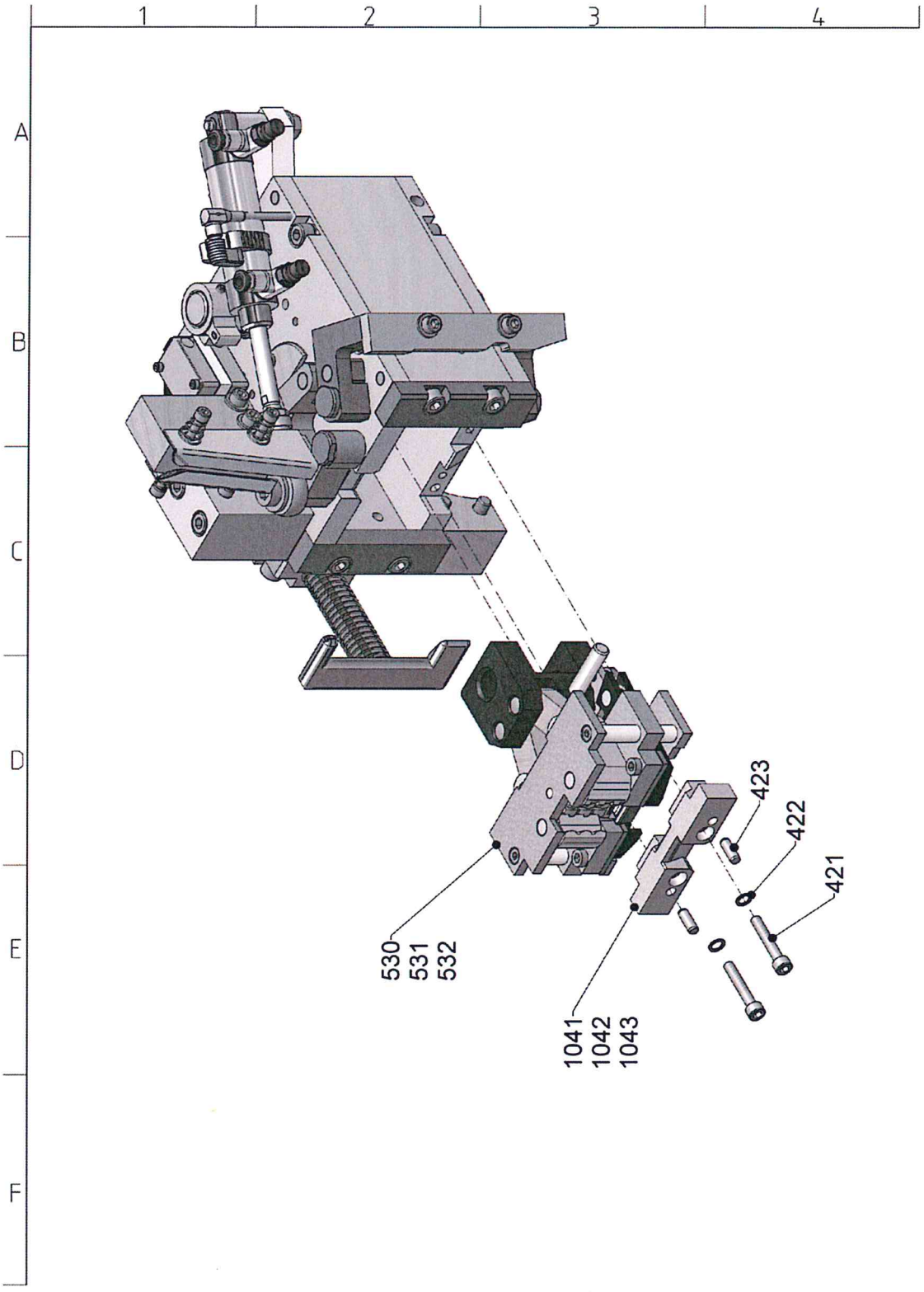
- **Verwenden Sie nur Original TITAN Ersatzteile!**
  Die Verwendung von anderen als TITAN Ersatzteilen schließt Garantieleistungen und Haftpflicht aus.

- **Only use original TITAN spare parts!**
  The use of other manufacturer's parts excludes liability and warranty services.

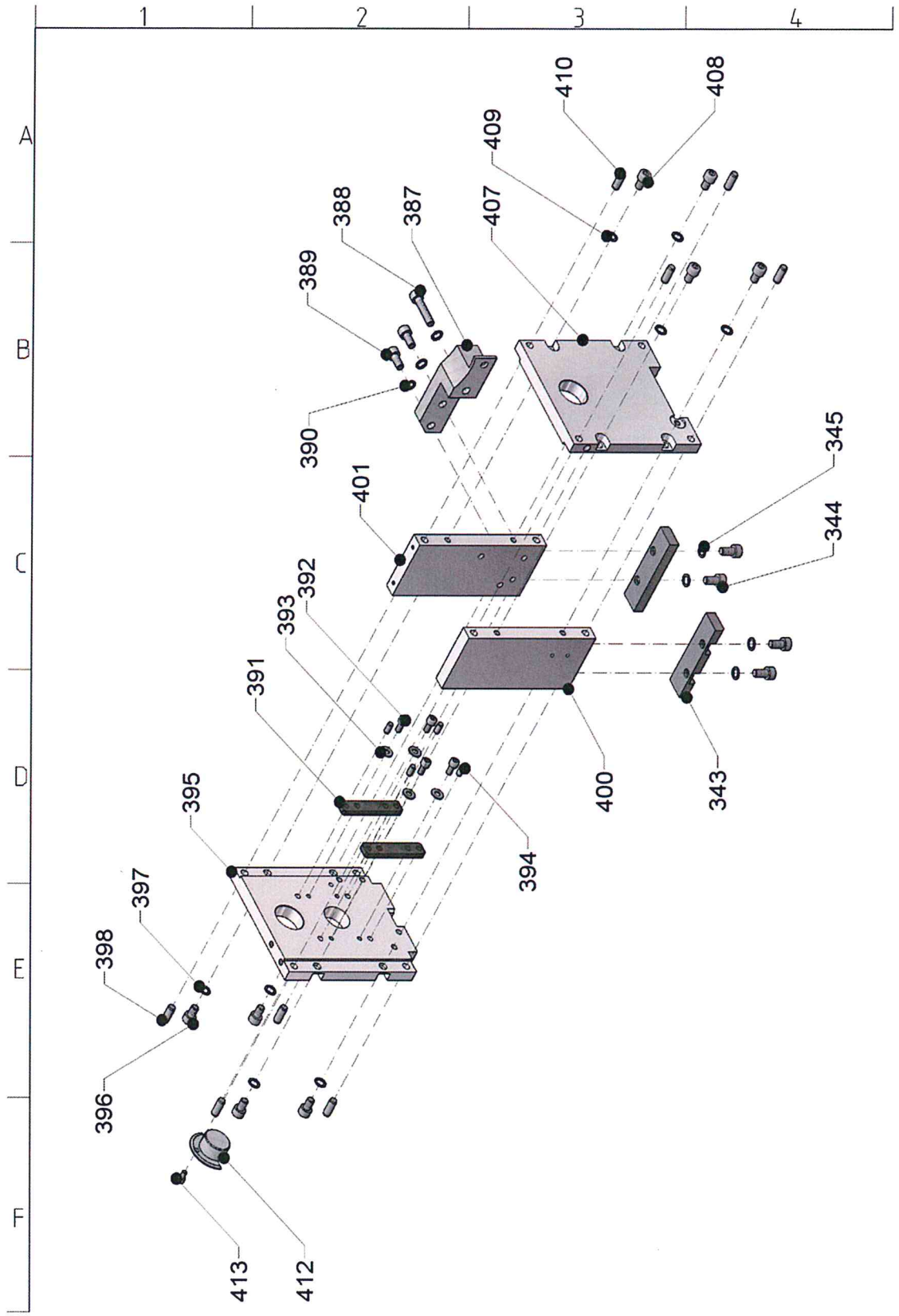
- **Utilisez uniquement des pieces de rechange TITAN d'origine!**
  L'utilisation de pieces de rechange d'autre origine exclut toutes prestations de garantie et toute responsabilité.

1. Verschließer / Sealing unit / Dispositif de fermeture

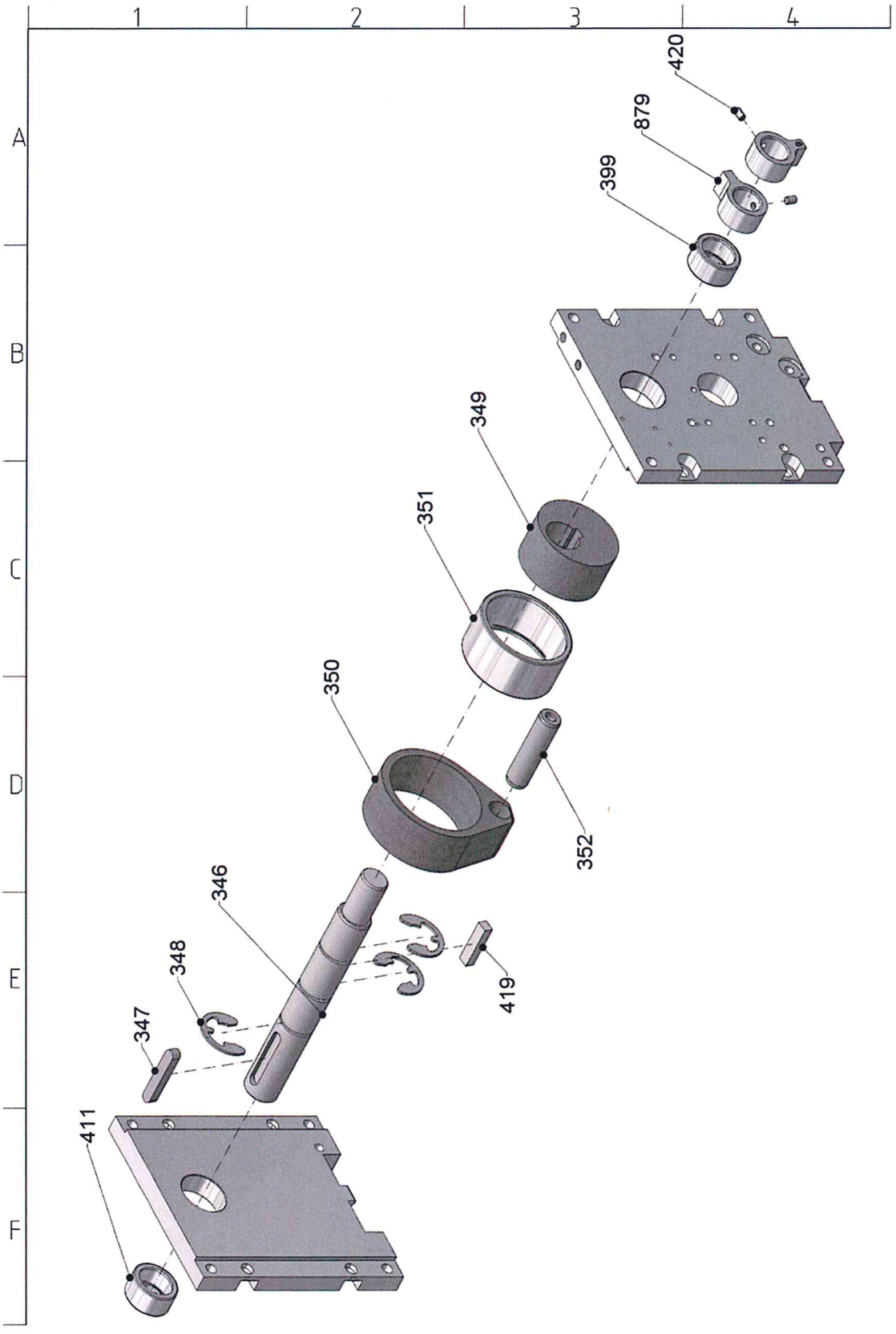
1.1. Bandabhängige Teile / Strap depending Parts / Part tributaire de feuillard



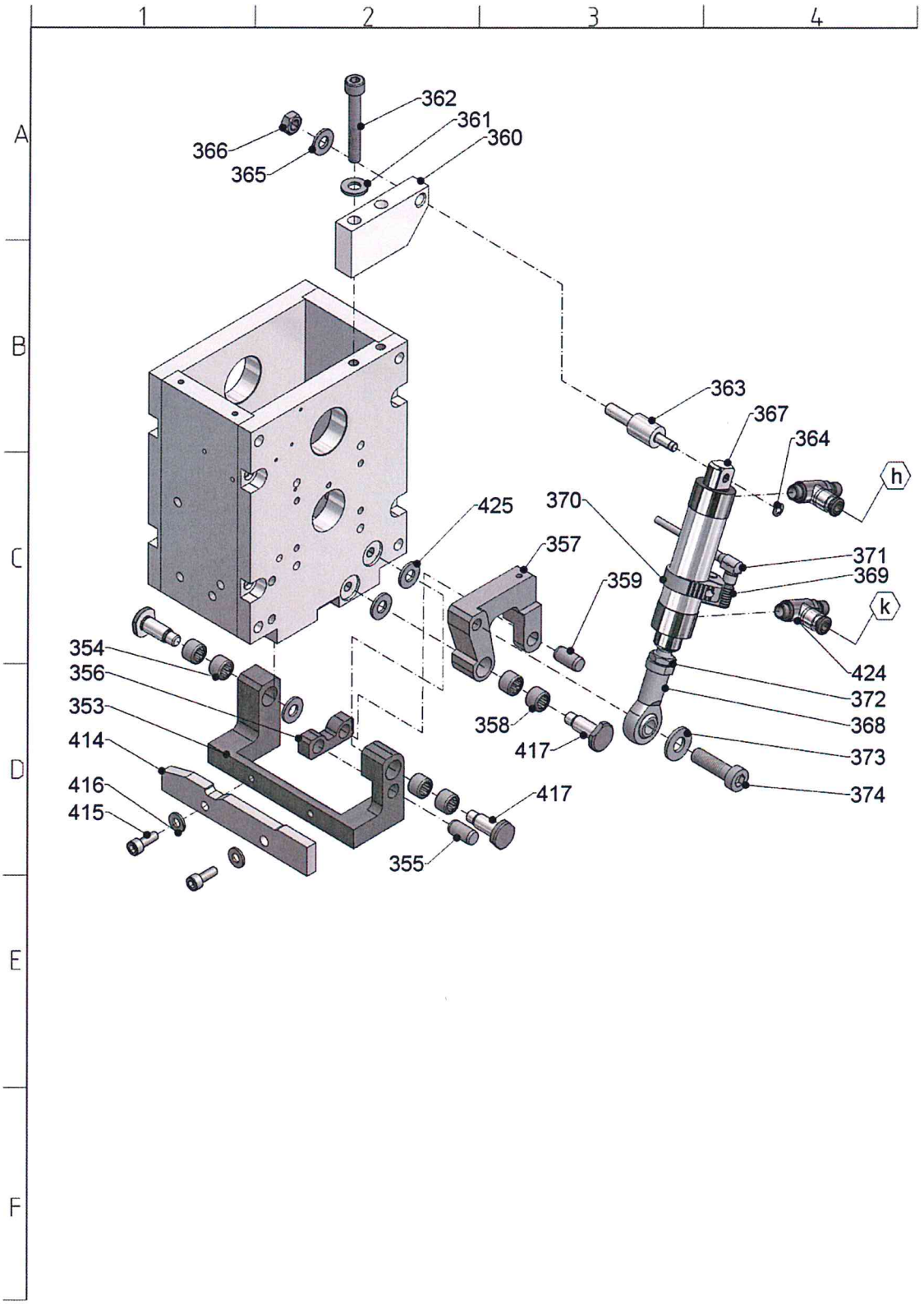
1.2. Gehäuse Verschließer / Housing sealing unit / Boîter de dispositiv de fermeture



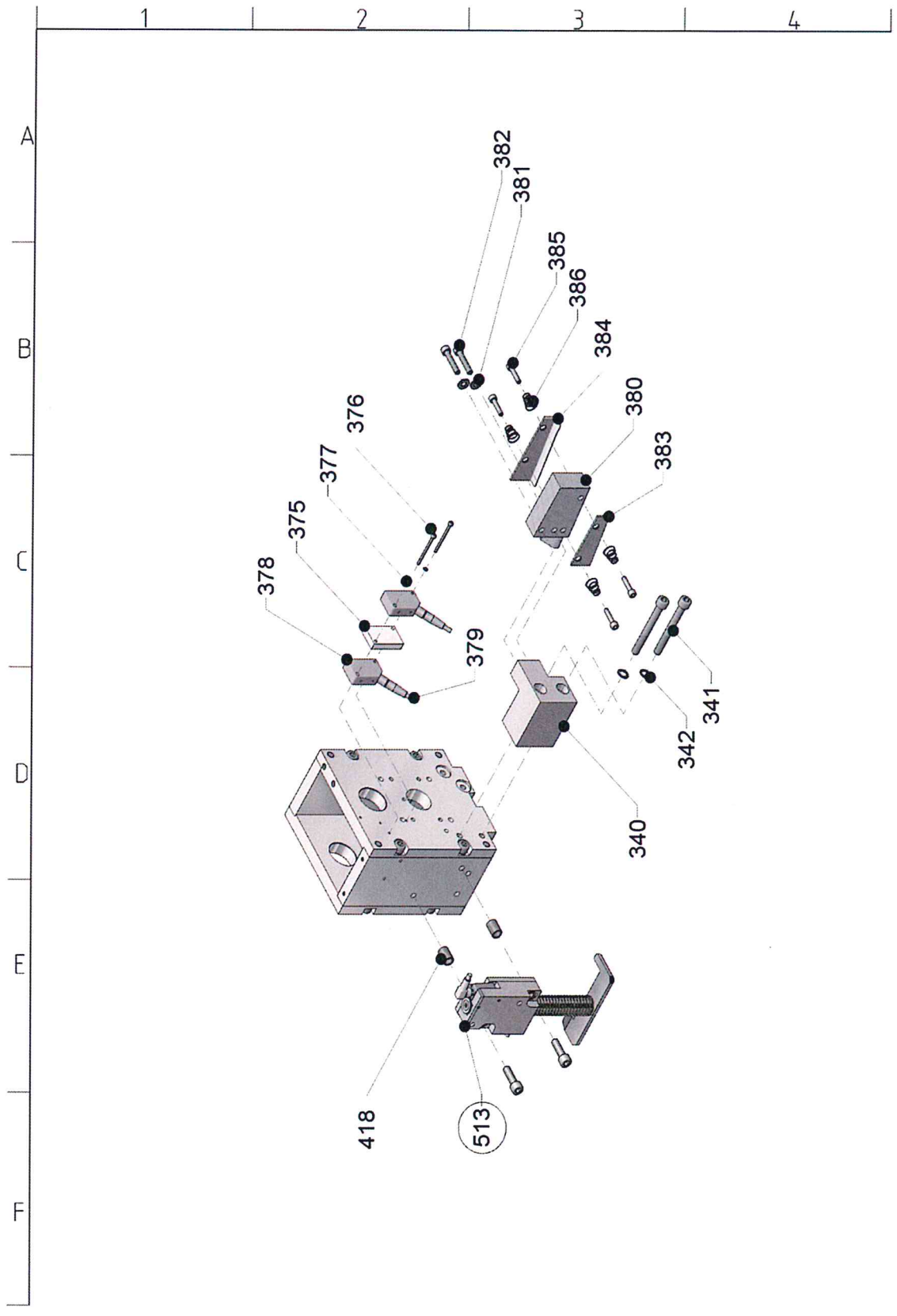
1.3. Nockenwelle / Cam shaft / Arbre á cames



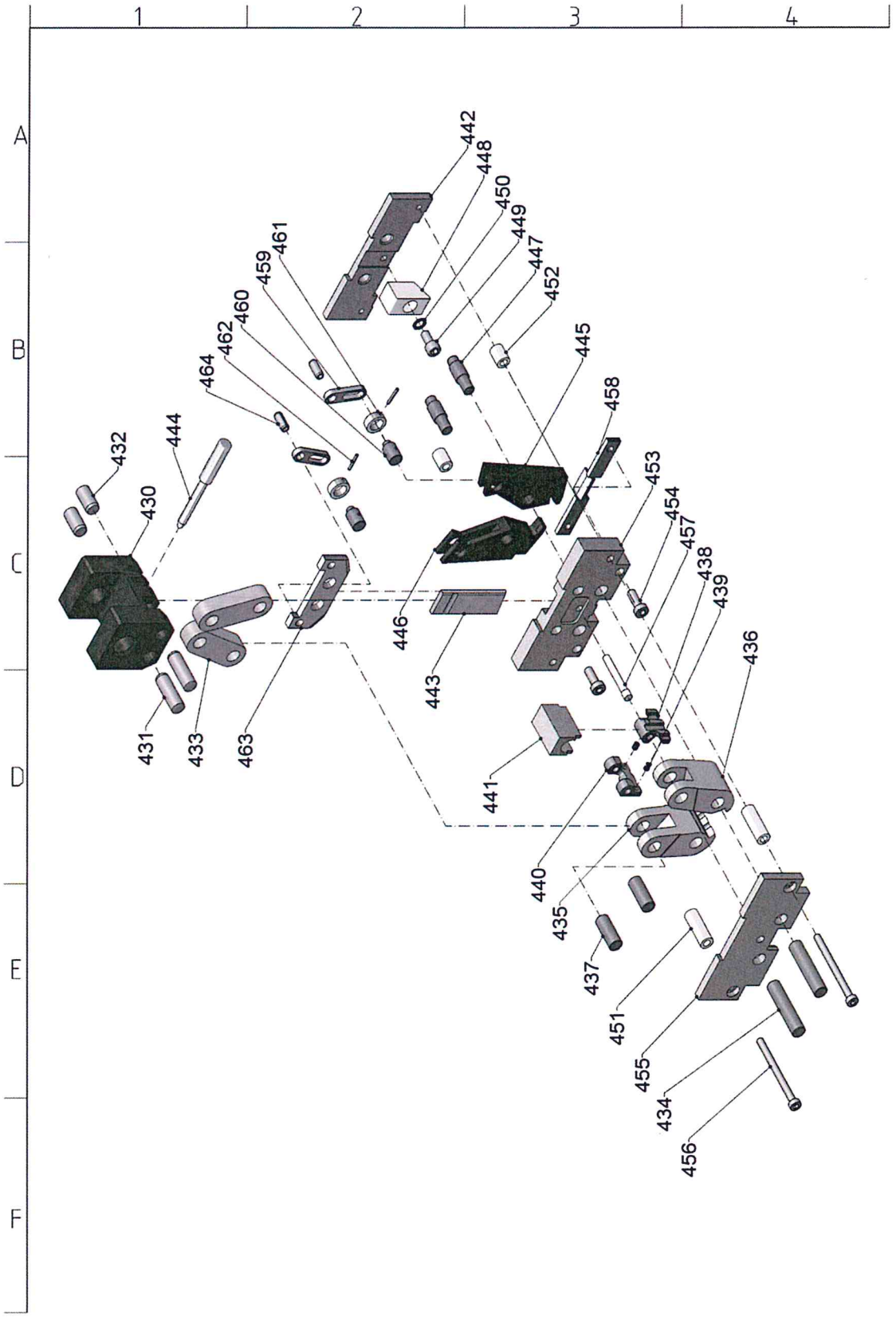
1.4. Bandführungsklappe / Strap guiding flap / Couvercle de guide de feuillard



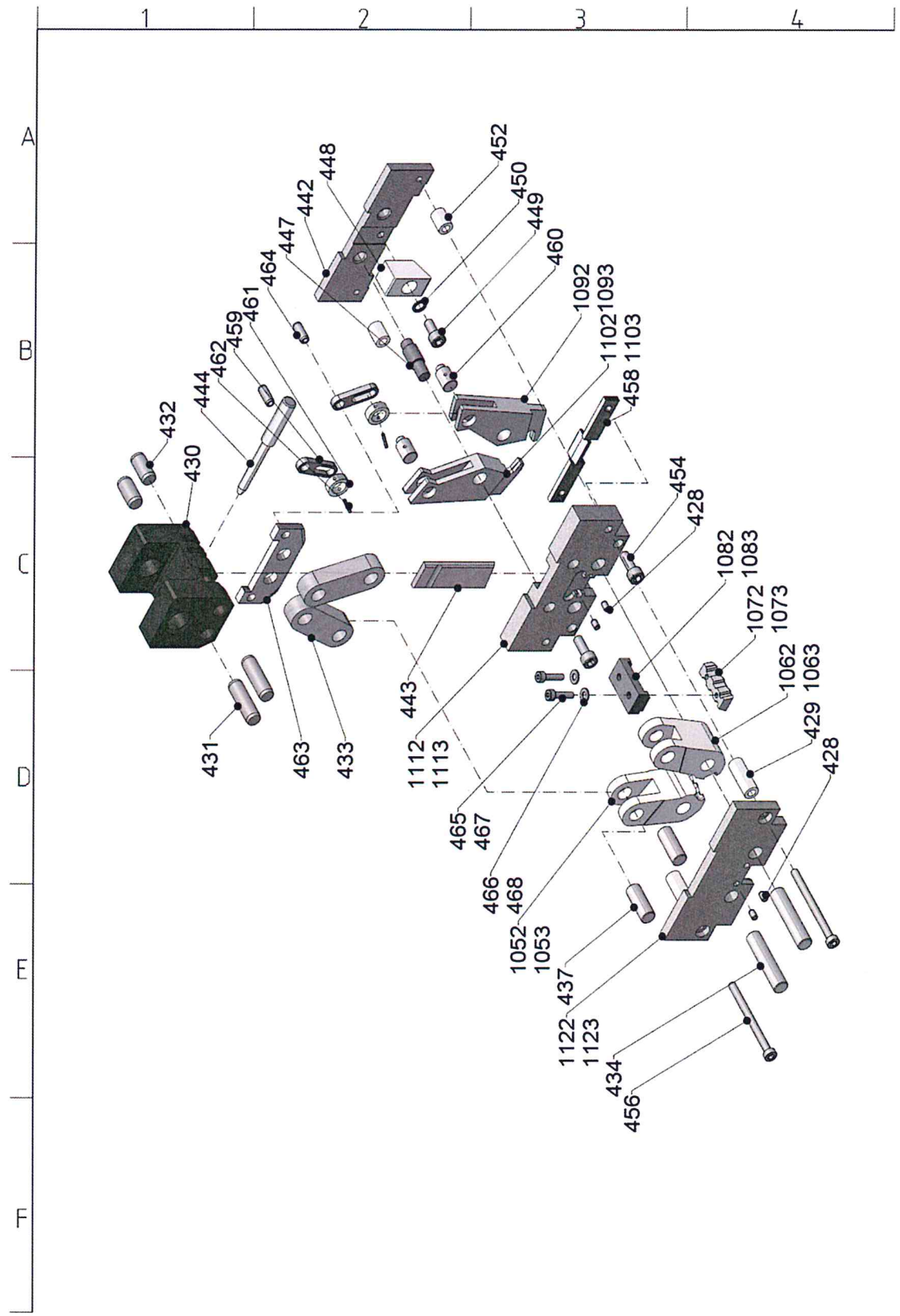
1.5. Anbauteile / Attachment parts / Piéces á ajouter



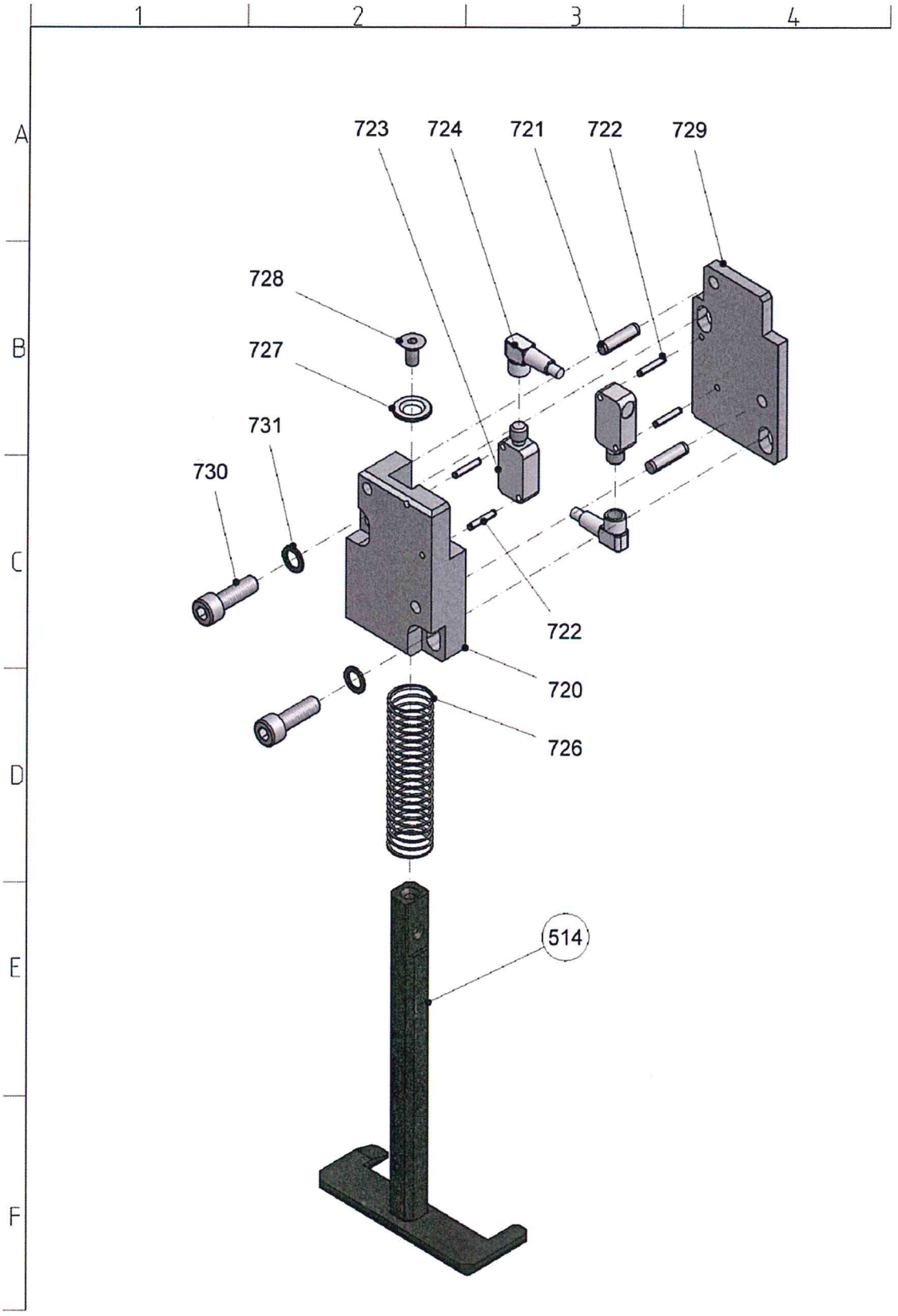
1.6. Messpaket 19mm / Cutter package 3 / 4Kit de couteaux 19mm



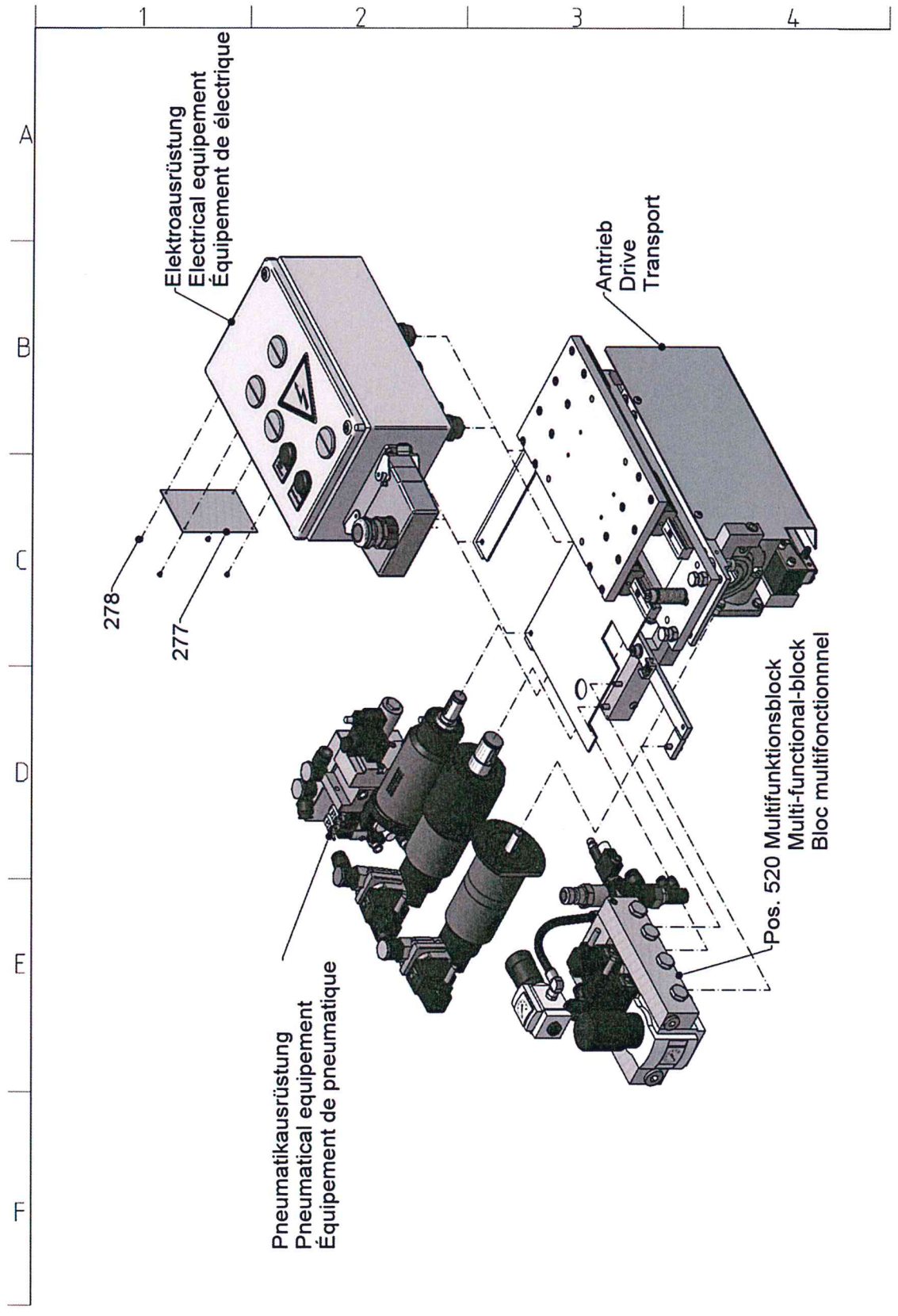
1.7. Messpaket 13mm – 16mm / Cutter package 1 / 2“-5 / 8“ / Kit de couteaux 13mm – 16mm



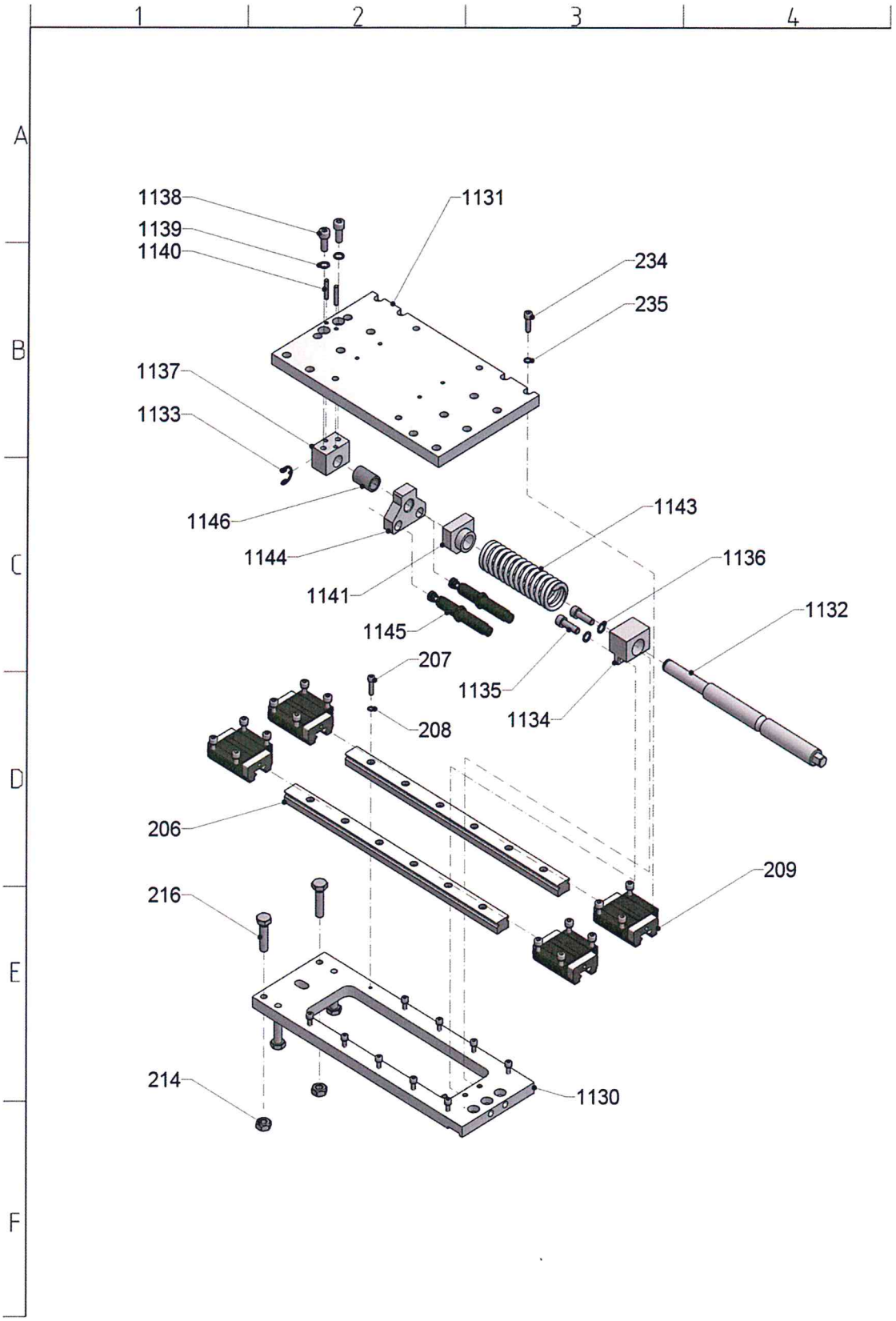
1.8. Kopfabschaltung / Head deactivation / Tête dé branchement



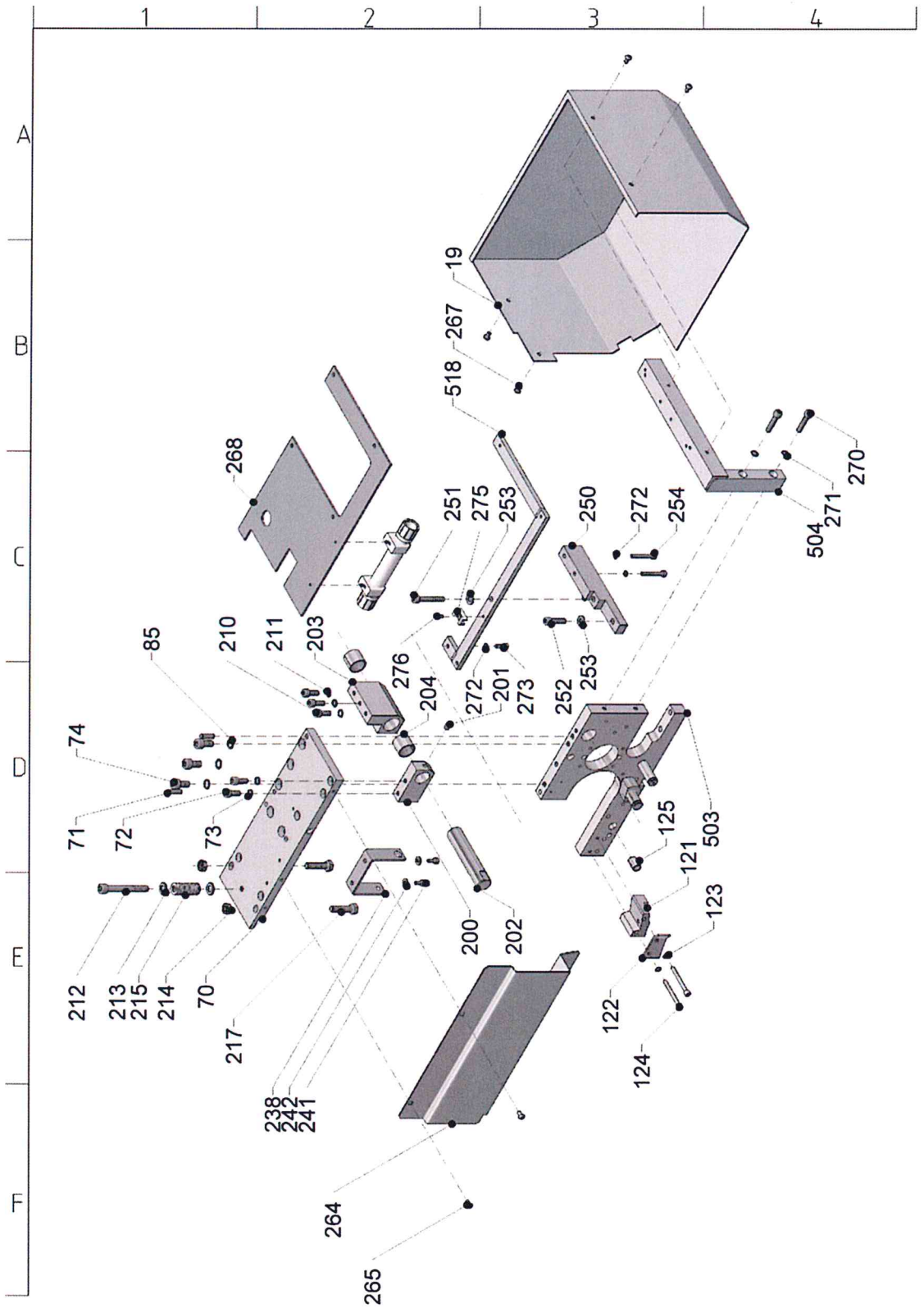
2. Antrieb / Drive / Entraînment



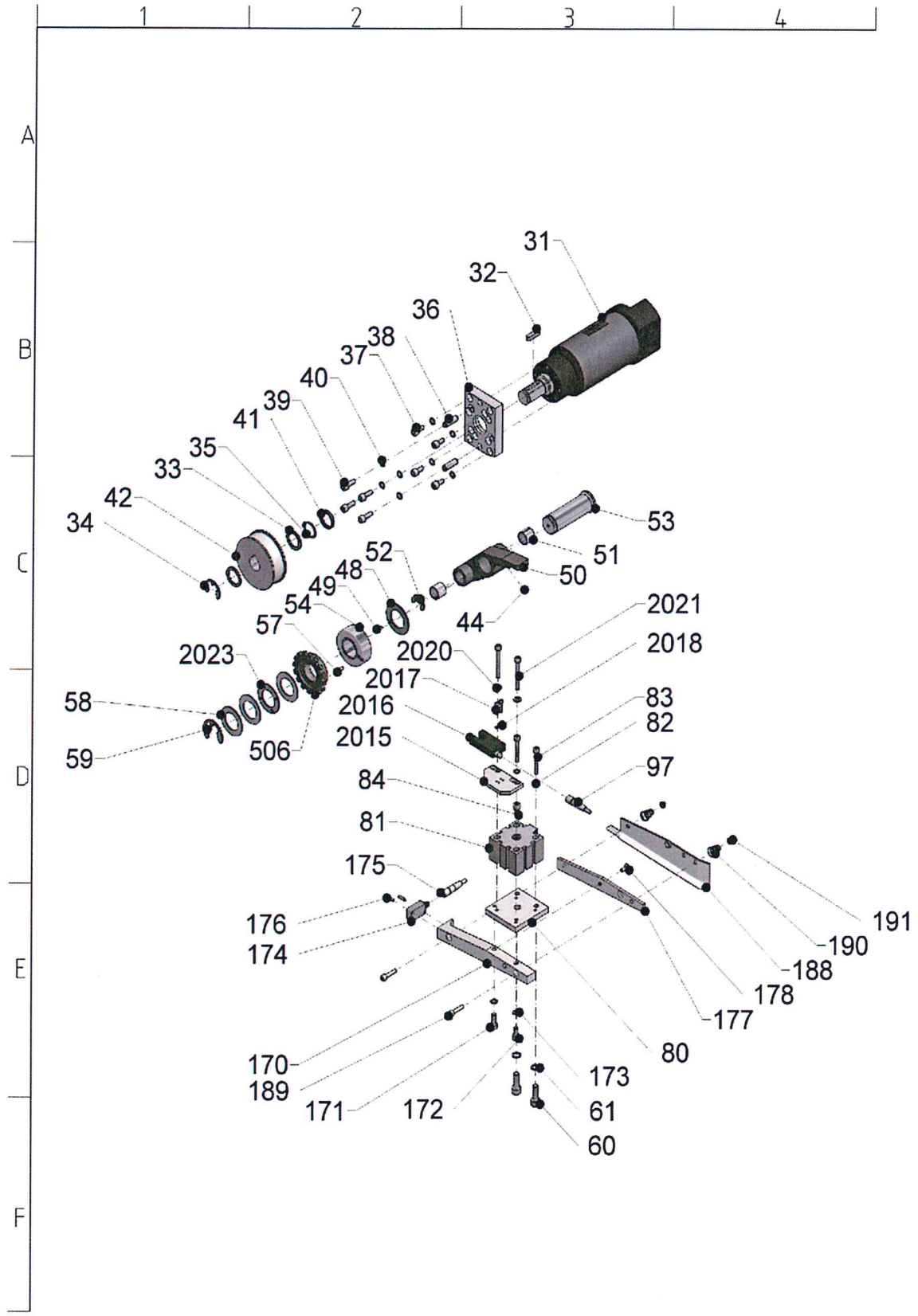
2.1. Kopfaufhängung / Head suspension / Suspension de tête



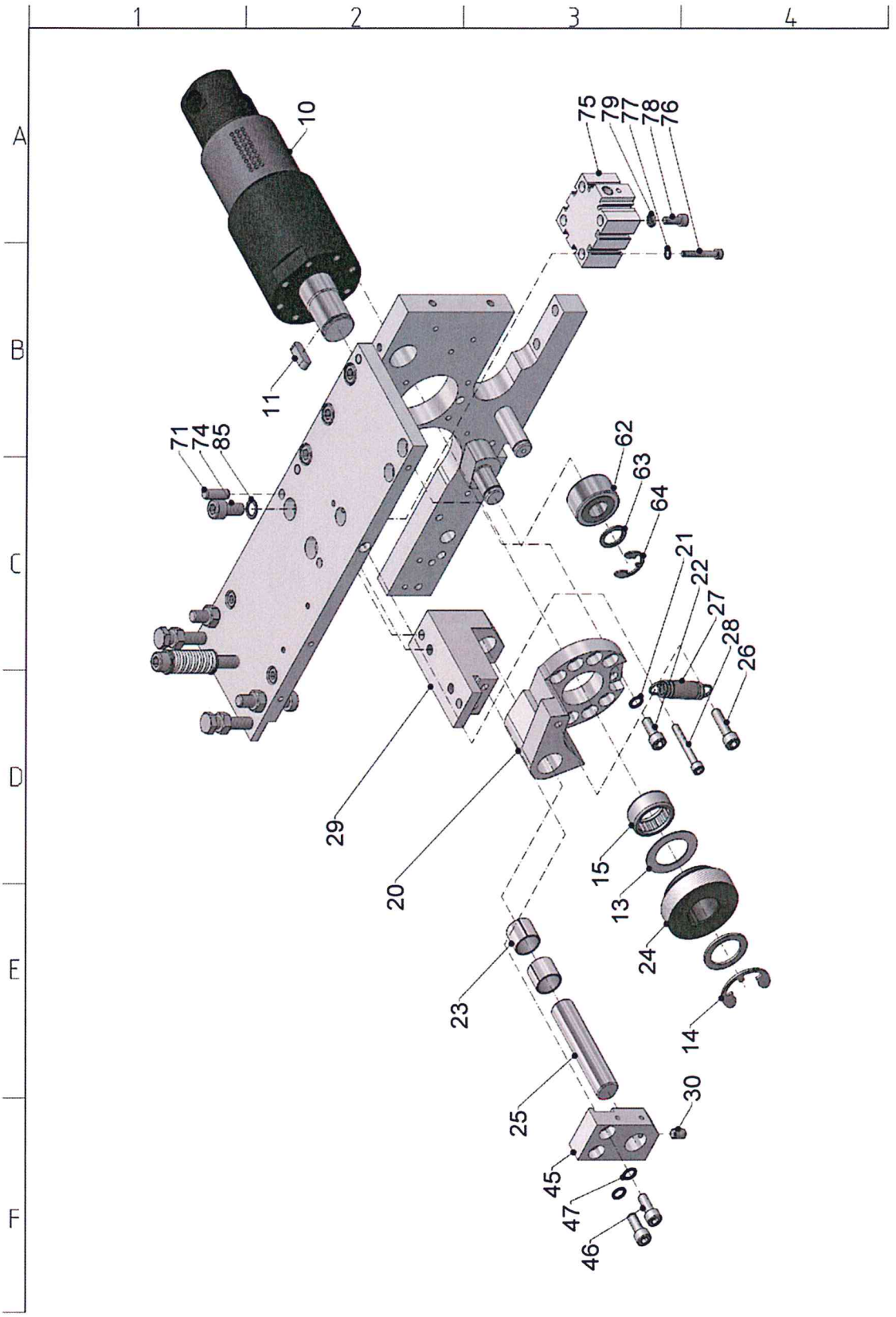
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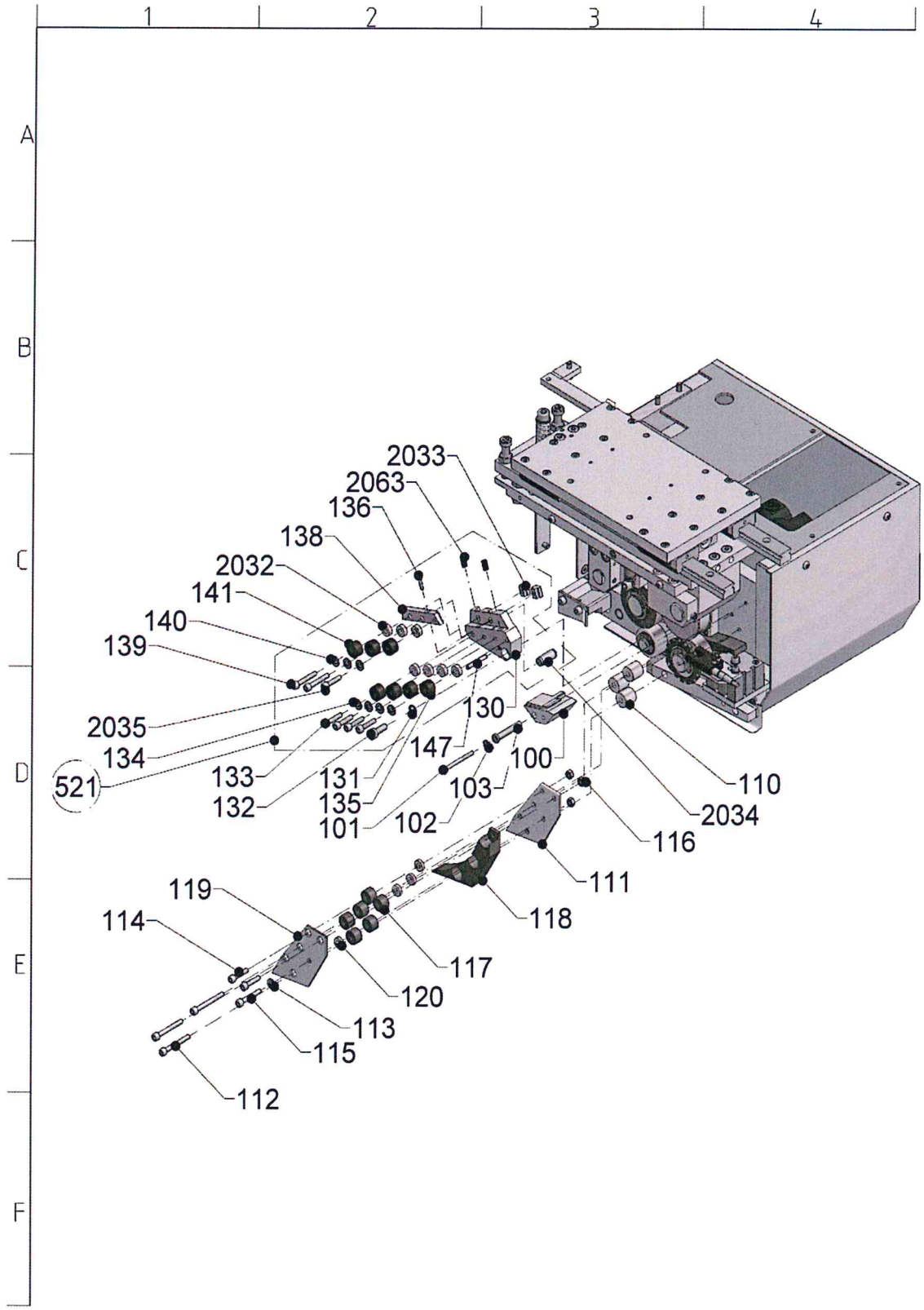
2.3. Transportantrieb / Transport / Transport



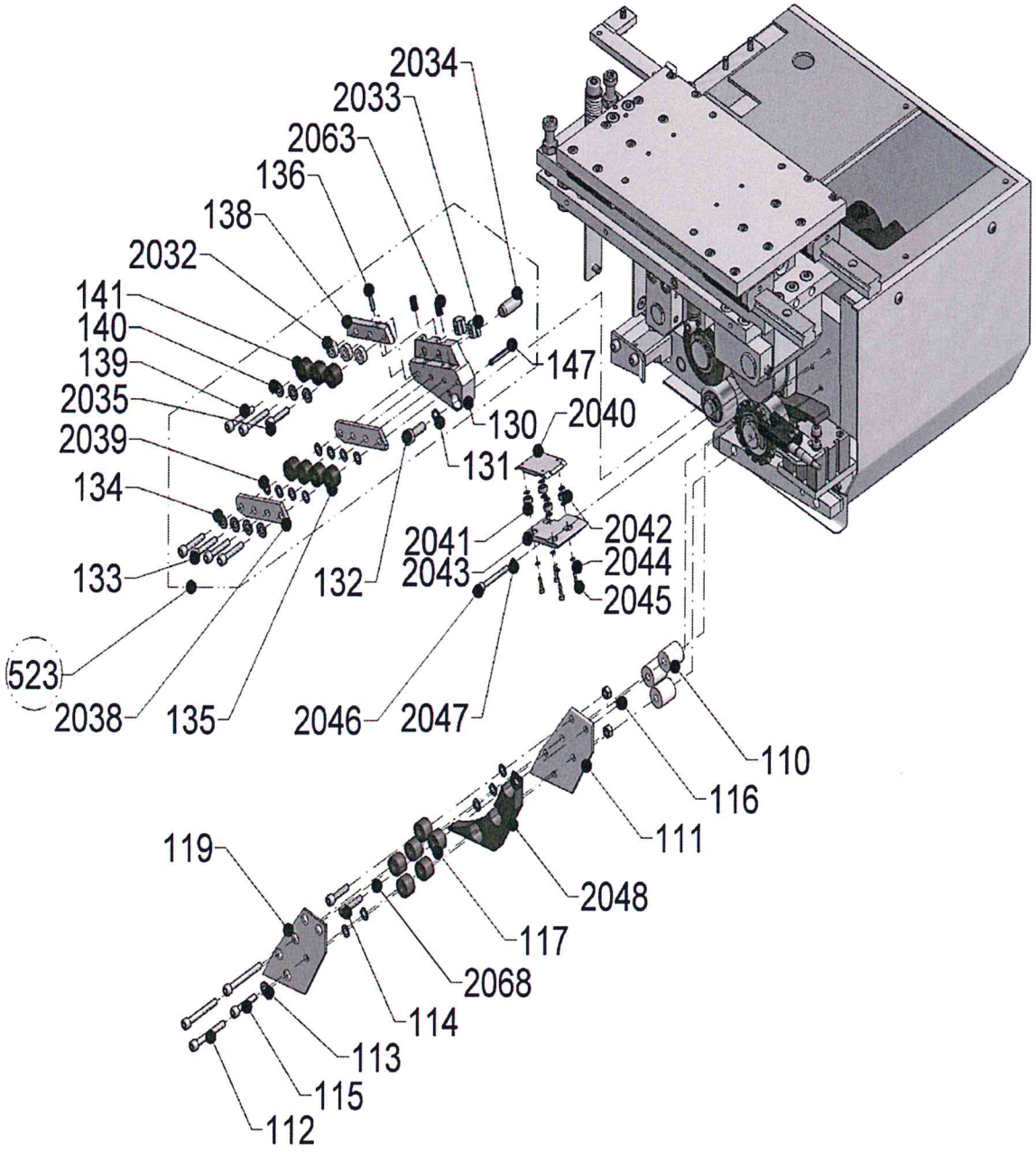
2.4. Spannantrieb / Tensioning system / Entraînement du serrage



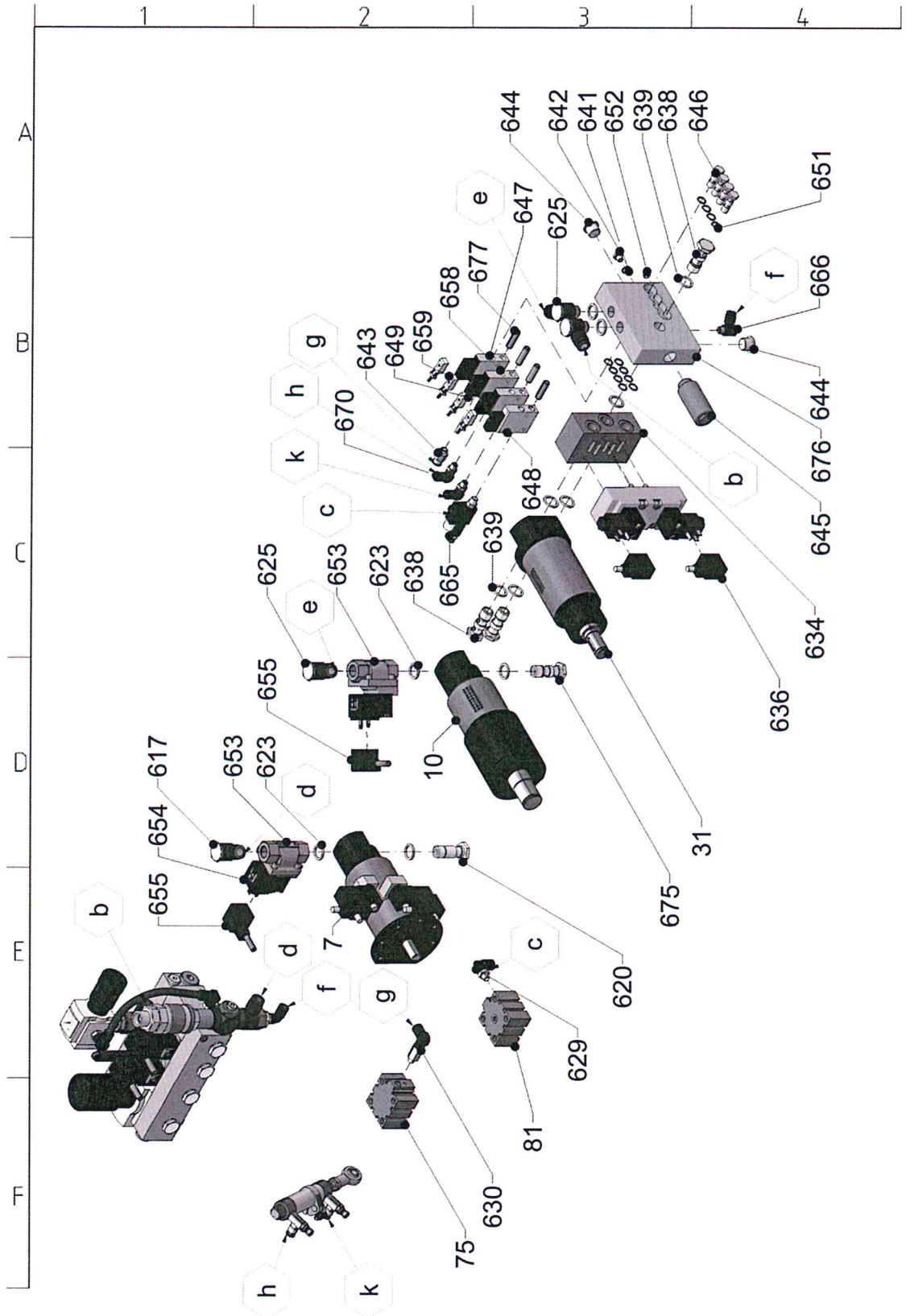
2.5. Bandanhängige Teile 16mm - 19mm / Strap depending Parts 5/8“-3/4 / Part tributaire defeuillard 16mm – 19mm



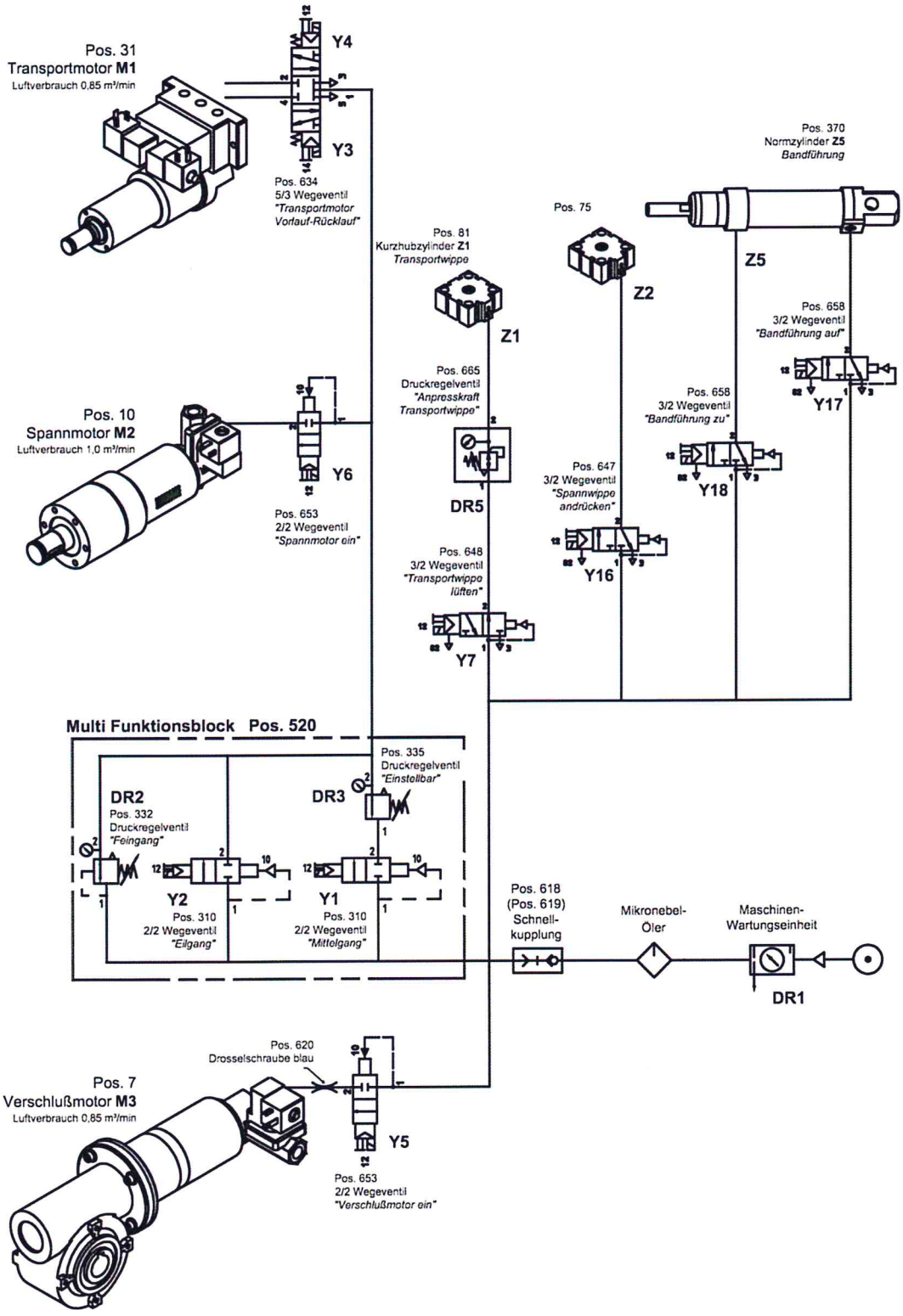
2.6. Bandanhängige Teile 13mm / Strap depending Parts 1 / 2“ / Part tributaire defeuillard 13mm



2.7. Pneumatikausrüstung / Pneumatic equipment / Équipement de pneumatique

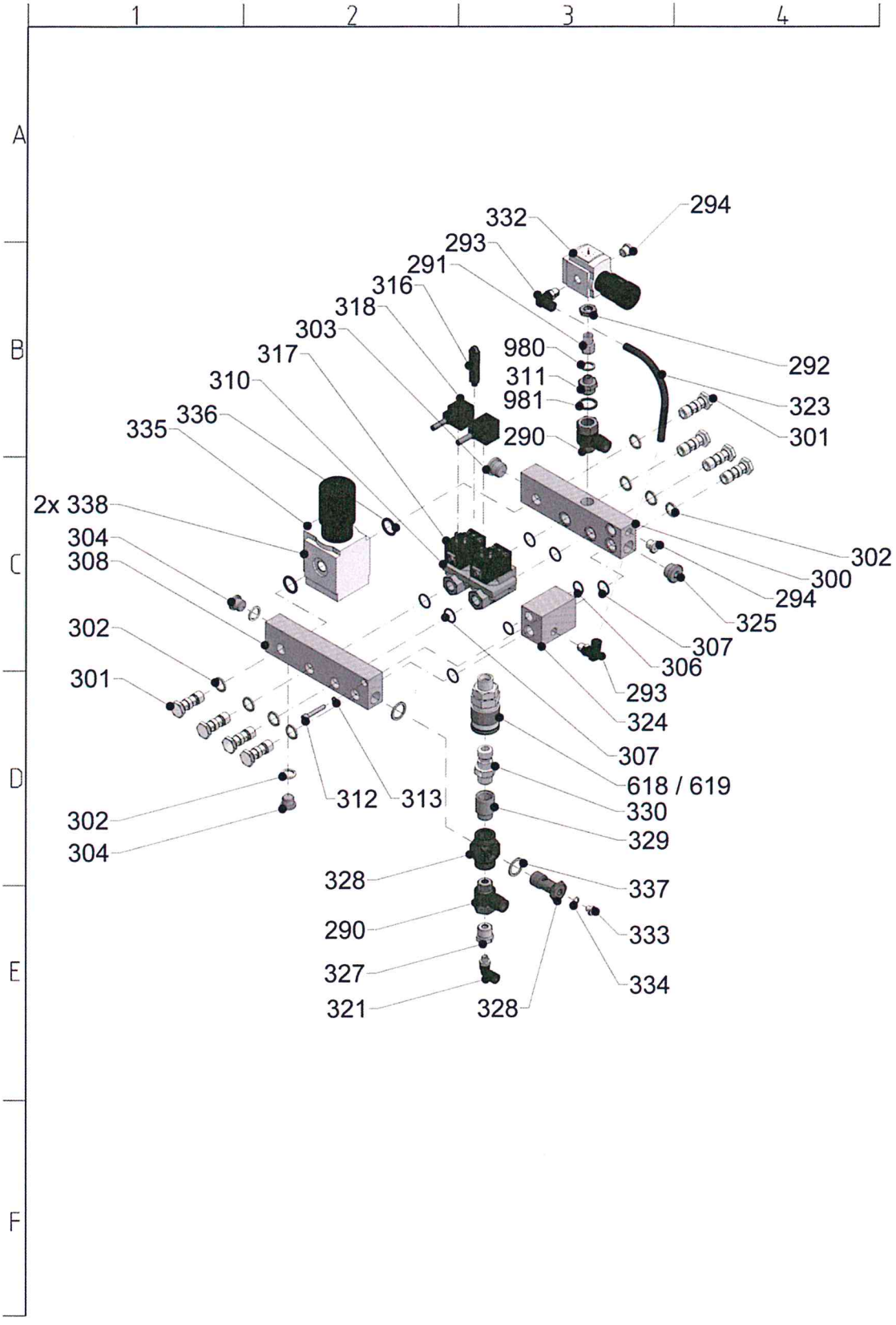


2.7.1. Pneumatikplan/pneumatic plan/équipement pneumatique

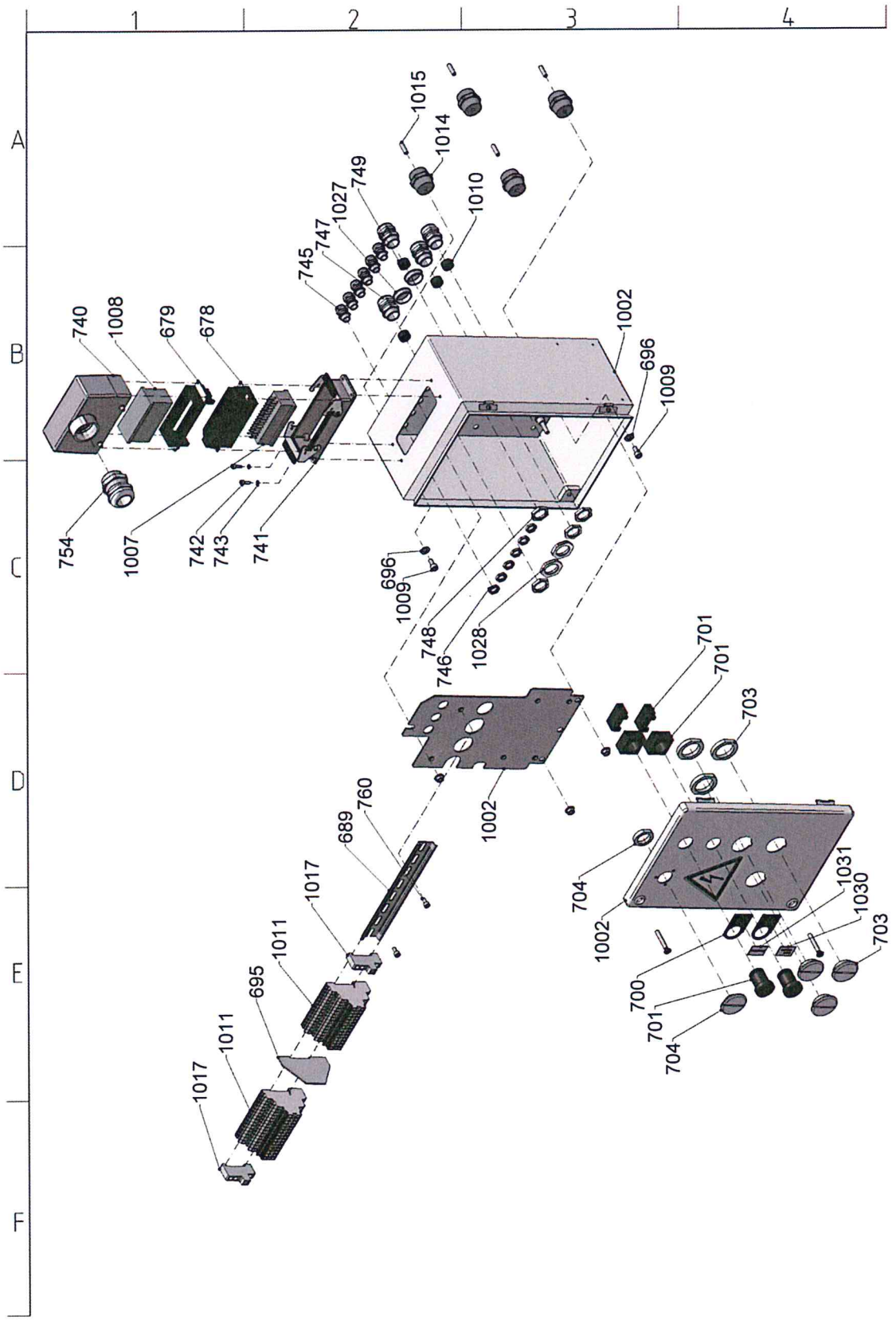


	Translation key	Traduction
Schnellkupplung	Fast coupling	raccord rapide
Mikronebel-Öler	Fine mist oiler	Huileur
Drosselschraube blau	Throttle screw blue	Commande de puissance bleu
Multi-Funktionsblock	Multi functional block	Bloc multifonctions
M1	Transport motor	moteur de transport
M2	Tension motor	moteur de serrage
M3	Sealing motor	moteur de fermeture
Z1	Short stroke cylinder Transport compensator	Cylindre de pression Bascule de transport
Z5	Standard cylinder Strap guide	Cylindre guidage de bande
DR1	Machine maintenance unit	unité de maintenance de la machine
DR2	Pressure control valve Precision motion	vanne de régulation de pression basse vitesse
DR3	Pressure control valve Adjustable	vanne de régulation de pression réglable
DR5	Pressure control valve Clamping force transport compensator	vanne de régulation de pression force de contact Bascule de transport
Y1	2/2 Distribution valve Medium speed	distributeur 2/2 voies vitesse moyenne
Y2	2/2 Distribution valve Fast speed	distributeur 2/2 voies vitesse supérieure
Y3/Y4	5/3 Distribution valve Transport motor forerun – return	distributeur 5/3 voies Moteur de transport Avance/ Retour
Y5	2/2 Distribution valve Sealing motor ON	distributeur 2/2 voies Moteur de fermeture ON
Y6	2/2 Distribution valve Tension motor ON	distributeur 2/2 voies Moteur de serrage ON
Y7	3/2 Distribution valve Ventilation transport compensator	distributeur 3/2 voies soulever Bascule de transport
Y16	3/2 Distribution valve Press on tension compensator	distributeur 3/2 voies Bascule de serrage pressé
Y17	3/2 Distribution valve Strap guide open	distributeur 3/2 voies guidage de bande ouvrir
Y18	3/2 Distribution valve Strap guide closed	distributeur 3/2 voies guidage de bande fermée

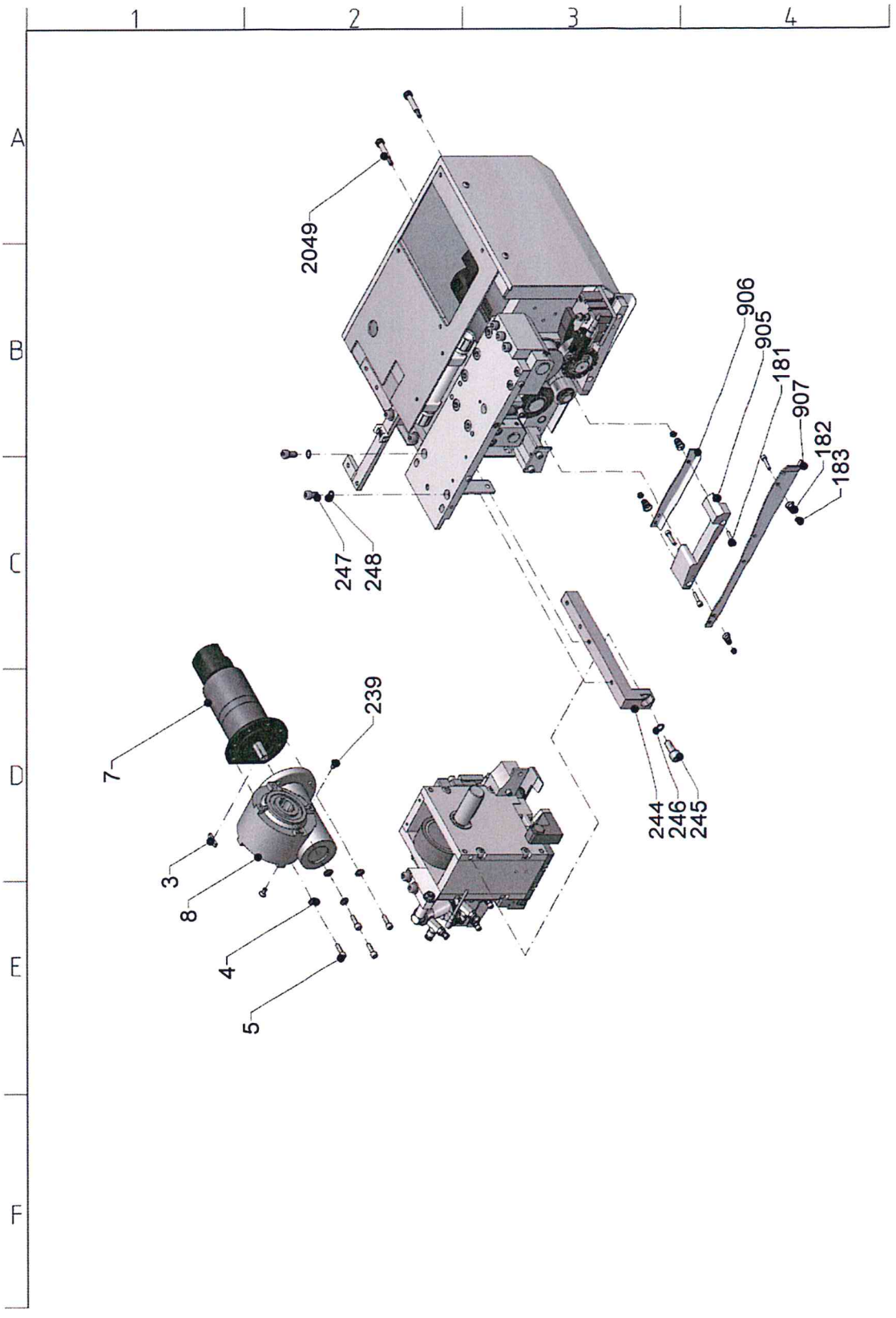
2.8. Multifunktionsblock / Multi functional block / Bloc multifunctionnel



2.9. Elektroausrüstung / Electrical equipment / Équipement de électrique



2.10.Anbauteile / Attachment parts / Piéces á ajouter



3. Ersatzteilliste, Spare Parts list, Liste des pièces de rechange

Pos	Bestell-Nr. Order code N° cde	Benennung	Description	Dénomination	St. Pcs. Pc.	
3	010003 – 3	DIN 6885 A - 5x5x25	DIN 6885 A - 5x5x25	DIN 6885 A - 5x5x25	1	
4	010003 – 4	DIN 6796 - 6	DIN 6796 - 6	DIN 6796 - 6	4	
5	010003 – 5	DIN 933 - M6x20	DIN 933 - M6x20	DIN 933 - M6x20	4	
7	010003 – 7	Nockenwerkmotor	Cam gear motor	Motuer système à cames	1	
8	010003 – 8	Schneckengetriebe	Worm gear unit	Engrenage à vis sans fin	1	
10	010003 – 10	Spannmotor	Tensioning motor	Motuer de tension	1	
11	010003 – 11	DIN 6885 A - 8x7x25	DIN 6885 A - 8x7x25	DIN 6885 A - 8x7x25	1	V
12	010003 – 12	DIN 988 S28x40x2	DIN 988 S28x40x2	DIN 988 S28x40x2	1	V
13	010003 – 13	Axialscheibe AS3047	Axial disc AS3047	Plaque axiale AS3047	1	V
14	010003 – 14	DIN 6799 - 24	DIN 6799 - 24	DIN 6799 - 24	1	
15	010003 – 15	Nadelhülse DL3016	Needle sleeve DL3016	Douille d'aguille DL3016	1	
19	**010003 – 19**	**Schutzhaube**	**Protective cover**	**Couvercle protecteur**	**1**	
20	**010003 – 20**	**Spannwippe**	**Tensioning rocker**	**Bascule de tension**	**1**	
21	010003 – 21	Sicherungsscheibe S8	Thrust washer S8	Rondelle d'arrêt S8	3	
22	010003 – 22	ISO 4762 - M8x20	ISO 4762 - M8x20	ISO 4762 - M8x20	3	
23	010003 – 23	DU-Buchse 2020DU	DU-bushing 2020DE	DU-boîte 2020DE	2	
24	**010003 – 24**	**Spannrad**	**Tensioning wheel**	**Roue de tension**	**1**	**V**
25	**010003 – 25**	**Achse 1**	**Axle 1**	**Arbre 1**	**1**	
26	010003 – 26	ISO 4762 - M8x30	ISO 4762 - M8x30	ISO 4762 - M8x30	1	
27	010003 – 27	Zugfeder	Tension Spring	Ressort de traction	1	
28	010003 – 28	ISO 4762 - M6x45	ISO 4762 - M6x45	ISO 4762 - M6x45	1	
29	**010003 – 29**	**Lagerbock**	**Pedestal**	**Palier**	**1**	
30	010003 – 30	DIN 913 - M8x12	DIN 913 - M8x12	DIN 913 - M8x12	1	
31	010003 – 31	Transportmotor	Transport motor	Moteur de transport	1	
32	010003 – 32	DIN 6885 A - 6x6x25	DIN 6885 A - 6x6x25	DIN 6885 A - 6x6x25	1	V
33	010003 – **33**	DIN 988 - 20x28x2	DIN 988 - 20x28x2	DIN 988 - 20x28x2	2	V
34	010003 – 34	DIN 6799 - 15	DIN 6799 - 15	DIN 6799 - 15	1	V
35	010003 – 35	DIN 471 - 20x1,2	DIN 471 - 20x1,2	DIN 471 - 20x1,2	1	
36	**010003 – 36**	**Lagerschild**	**Bearing plate**	**Flasque**	**1**	
37	010003 – 37	ISO 4762 - M6x12	ISO 4762 - M6x12	ISO 4762 - M6x12	4	
38	010003 – 38	ISO 8734 - 8m6x24	ISO 8734 - 8m6x24	ISO 8734 - 8m6x24	2	
39	010003 – 39	ISO 4762 - M6x16	ISO 4762 - M6x16	ISO 4762 - M6x16	4	
40	010003 – 40	Sicherungsscheibe S6	Thrust washer S6	Rondelle d'arrêt S6	8	
41	010003 – 41	Dichtring	Sealing ring	Bague d'étanchéité	1	

V = Verschleißteile ; Wearing parts ; Pièces de rechange **B** = bei Bedarf ; If necessary ; Au besoin
R = Austauschteile ; Replacement parts ; Pièces d'échange **O** = Option ; Option ; Option

Pos.	Bestell-Nr. Order code N° cde	Benennung	Description	Dénomination	St. Pcs. Pc.	
42	**010003 – 42**	**Transportrolle**	**Conveying roller**	**Galet de roulement**	**1**	**V**
44	**010003 – 42**	DIN 913 - M6x8	DIN 913 - M6x8	DIN 913 - M6x8	1	
45	**010003 – 45**	**Lagerdeckel**	**Cap piece of the bearing**	**Cannette**	**1**	
46	010003 – 46	ISO 4762 - M8x20	ISO 4762 - M8x20	ISO 4762 - M8x20	2	
47	010003 – 47	Sicherungsscheibe S8	Thrust washer S8	Rondelle d'arrêt S8	2	
48	010003 – 48	DU-Anlaufscheibe WC24DE	DU-Washer WC24DU	DU-Glace d'approche WC24DU	1	
49	010003 – 49	ISO 8752 - 3x8	ISO 8752 - 3x8	ISO 8752 - 3x8	1	
50	**010003 – 50**	**Transportschwinge**	**Conveying rocker**	**Aile de transport**	**1**	
51	010003 – 51	DU-Buchse 1615DU	DU-bushing 1615DU	DU-boîte 1615DU	2	
52	010003 – 52	DIN 6799 - 12	DIN 6799 - 12	DIN 6799 - 12	1	
53	**010003 – 53**	**Achse 2**	**Axle 2**	**Arbre 2**	**1**	
54	**010003 – 54**	**Stützrolle**	**Supporting roller**	**Rouleau d'appui**	**1**	**V**
57	010003 – 57	ISO 8752 - 4x12	ISO 8752 - 4x12	ISO 8752 - 4x12	1	
58	010003 – 58	Axialscheibe AS2542	Axial disk AS2542	Plaque axiale AS2542	3	V
59	010003 – 59	DIN 6799 - 19	DIN 6799 - 19	DIN 6799 - 19	1	V
60	010003 – 60	ISO 4762 - M8x22	ISO 4762 - M8x22	ISO 4762 - M8x22	2	
61	010003 – 61	Sicherungsscheibe S8	Thrust washer S8	Rondelle d'arrêt S8	2	
62	010003 – 62	Laufrolle FG1740EE	Roller FG1740EE	Galet de roulement FG1740EE	1	V
63	010003 – 63	DIN 988 - S17x24	DIN 988 - S17x24	DIN 988 - S17x24	1	V
64	010003 – 64	DIN6799 - 15	DIN6799 - 15	DIN6799 - 15	1	V
70	**010003 – 70**	**Deckplatte**	**Cover plate**	**Plaque de couvertre**	**1**	
71	010003 – 71	ISO 8734 - 8m6x24	ISO 8734 - 8m6x24	ISO 8734 - 8m6x24	4	
72	010003 – 72	ISO 4762 - M8x20	ISO 4762 - M8x20	ISO 4762 - M8x20	2	
73	010003 – 73	Sicherungsscheibe S8	Thrust washer S8	Rondelle d'arrêt S8	2	
74	010003 – 74	ISO 4762 - M10x20	ISO 4762 - M10x20	ISO 4762 - M10x20	5	
75	010003 – 75	Kurzhubzylinder	Short stroke cylinder	Cylindre à faible course	1	
76	010003 – 76	ISO 4762 - M5x35	ISO 4762 - M5x35	ISO 4762 - M5x35	4	
77	010003 – 77	Sicherungsscheibe S5	Thrust washer S5	Rondelle d'arrêt S5	4	
78	010003 – 78	ISO 4762 - M6x16	ISO 4762 - M6x16	ISO 4762 - M6x16	1	
79	010003 – 79	DIN 439 - B - M6	DIN 439 - B - M6	DIN 439 - B - M6	1	
80	**010003 – 80**	**Zylinderplatte**	**Cylinder plate**	**Plaque de cylindre**	**1**	
81	010003 – 81	Kurzhubzylinder	Short stroke cylinder	Cylindre à faible course	1	
82	010003 – 82	Sicherungsscheibe S5	Thrust washer S5	Rondelle d'arrêt S5	2	
83	010003 – 83	ISO 4762 - M5x35	ISO 4762 - M5x35	ISO 4762 - M5x35	2	
84	010003 – 84	ISO 4762 - M6x12	ISO 4762 - M6x12	ISO 4762 - M6x12	17	

V = Verschleißteile ; Wearing parts ; Pièces de rechange
R = Austauschteile ; Replacement parts ; Pièces d'échange
B = bei Bedarf ; If necessary ; Au besoin
O = Option ; Option ; Option

Pos.	Bestell-Nr. Order code N° cde	Benennung	Description	Dénomination	St. Pcs. Pc
85	010003 – 85	Sicherungsscheibe S10	Thrust washer S10	Rondelle d'arrêt S10	5
97	010003 – 97	Kabeldose	Cable box	Boîte de câbles	1
100	**010003 – 100**	**Bandführungs-klotz**	**Band routing block**	**Bloc de guide de feuillard**	**1**
101	010003 – 101	ISO 4762 - M5x55	ISO 4762 - M5x55	ISO 4762 - M5x55	1
102	010003 – 102	DIN 6796 - 5	DIN 6796 - 5	DIN 6796 - 5	1
103	**010003 – 103**	**Distanz-büchse 1**	**Distance sleeve 1**	**Douille d'écartement1**	**1**
110	**010003 – 110**	**Distanz-büchse 2**	**Distance sleeve 2**	**Douille d'écartement 2**	**3**
111	**010003 – 111**	**Seitenführung rechts hinten**	**Side guidance right back**	**Guide latérale droite**	**1**
112	010003 – 112	ISO 4762 - M6x45	ISO 4762 - M6x45	ISO 4762 - M6x45	3
113	010003 – 113	DIN 6796 - 6	DIN 6796 - 6	DIN 6796 - 6	1
114	010003 – 114	ISO 4762 - M6x25	ISO 4762 - M6x25	ISO 4762 - M6x25	2
115	010003 – 115	ISO 4762 - M6x35	ISO 4762 - M6x35	ISO 4762 - M6x35	1
116	010003 – 116	ISO 4032 - M6	ISO 4032 - M6	ISO 4032 - M6	3
117	010003 – 117	Laufrolle FG619EE	Roller FG619EE	Galet de roulement FG619EE	6
118	**010003 – 118**	**Bandführung**	**Band guidance**	**Guide de feuillard**	**1**
119	**010003 – 119**	**Seitenführung hinten links**	**Side guidance left back**	**Guide latérale gauche**	**1**
120	**010003 – 120**	**Distanzscheibe**	**Distance washer**	**Rondelle d'écartement**	**7**
121	**010003 – 121**	**Führung, vorn**	**Guidance, front**	**Guide, avant**	**1**
122	**010003 – 122**	**Seitenführung, vorn**	**Side guidance, front**	**Guide latéral, avant**	**1**
123	010003 – 123	Sicherungsscheibe S6	Thrust washer S6	Rondelle d'arrêt S6	2
124	010003 – 124	ISO 4762 - M6x55	ISO 4762 - M6x55	ISO 4762 - M6x55	2
125	010003 – 125	DU-Buchse 1220DU	DU-bushing 1220DU	DU-boîte 1220DU	1
130	**010003 – 130**	**Richtrollenhalter**	**Roller holding device**	**Appui à galet**	**1**
131	**010003 – 131**	**Sicherungsscheibe S8**	**Thrust washer S8**	**Rondelle d'arrêt S8**	**1**
132	010003 – 132	ISO 4762 - M8 x 20	ISO 4762 - M8 x 20	ISO 4762 - M8 x 20	1
133	010003 – 133	ISO 4762 - M6x25	ISO 4762 - M6x25	ISO 4762 - M6x25	4
134	010003 – 134	DIN 6796 - 6	DIN 6796 - 6	DIN 6796 - 6	4
135	010003 – 135	Laufrolle FG619EE	Roller FG619EE	Galet de roulement FG619EE	4
136	010003 – 136	ISO 4762 - M4x16	ISO 4762 - M4x16	ISO 4762 - M4x16	1
138	**010003 – 138**	**Rollenhalter**	**Roller holding device**	**Appui à galet**	**1**
139	010003 – 139	ISO 4762 - M6x35	ISO 4762 - M6x35	ISO 4762 - M6x35	3

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Pos.	Bestell-Nr. Order code N° cde	Benennung	Description	Dénomination	St. Pcs. Pc.	
140	010003 – 140	DIN 6796 - 6	DIN 6796 - 6	DIN 6796 - 6	3	
141	010003 – 141	Laufrolle FG619EE	Roller FG619EE	Galet de roulement FG619EE	3	
147	010003 – 147	ISO 8750 - 5x28	ISO 8750 - 5x28	ISO 8750 - 5x28	1	
170	**010003 – 170**	**Kanalrücken hinten**	**Channelback rear**	**Canal dorsal derrière**	**1**	
171	010003 – 171	ISO 4762 - M6x16	ISO 4762 - M6x16	ISO 4762 - M6x16	1	
172	010003 – 172	ISO 4762 - M6x12	ISO 4762 - M6x12	ISO 4762 - M6x12	1	
173	010003 – 173	Sicherungsscheibe S6	Thrust washer S6	Rondelle d'arrêt S6	2	
174	010003 – 174	Näherungsschalter	Proximity switch	Détecteur de proximité	1	
175	010003 – 175	Kabeldose	Cable box	Boîte de câbles	1	
176	010003 – 176	ISO 13337 - 3x12	ISO 13337 - 3x12	ISO 13337 - 3x12	2	
177	**010003 – 177**	**Seitenführung**	**Side guidance**	**Guide latérale**	**1**	
178	010003 – 178	ISO 10642 - M5x12	ISO 10642 - M5x12	ISO 10642 - M5x12	1	
181	**010003 – 181**	**Federschraube**	**Spring screw**	**Vis à ressort**	**2**	V
182	010003 – 182	Kegelfeder	Conical wire spring	Plume de cône	2	
183	010003 – 183	ISO 10511 - M5	ISO 10511 - M5	ISO 10511 - M5	2	
188	**010003 – 188**	**Kanalklappe rechts hinten**	**Channel flap back right**	**Couvercle du canal droit derrieère**	**1**	V
189	**010003 – 189**	**Federschraube**	**Spring screw**	**Vis à ressort**	**2**	
190	010003 – 190	Kegelfeder	Conical wire spring	Plume de cône	2	
191	010003 – 191	DIN 985 - M5	DIN 985 - M5	DIN 985 - M5	2	
200	**010003 – 200**	**Lagerklotz**	**Bearing block**	**Bloc de stockage**	**1**	
201	010003 – 201	ISO 913 - M8x12	ISO 913 - M8x12	ISO 913 - M8x12	1	
202	**010003 – 202**	**Achse**	**Axle**	**Arbre**	**1**	
203	**010003 – 203**	**Auflage**	**Support**	**Appui**	**1**	
204	010003 – 204	DU-Buchse 2525DU	DU-bushing 2525DU	DU-boîte 2525DU	2	
206	010003 – 206	Führungsschiene	Guidance rail	Bande de guidage	2	
207	010003 – 207	ISO 4762 - M5 x 20	ISO 4762 - M5 x 20	ISO 4762 - M5 x 20	10	
208	010003 – 208	Sicherungsscheibe S5	Thrust washer S5	Rondelle d'arrêt S5	10	
209	010003 – 209	Führungswagen	Guidance carriage	Chariot de guidange	4	
210	010003 – 210	ISO 4762 - M8x20	ISO 4762 - M8x20	ISO 4762 - M8x20	3	
211	010003 – 211	Sicherungsscheibe S8	Thrust washer S8	Rondelle d'arrêt S8	3	
212	010003 – 212	ISO 4762 - M10x80	ISO 4762 - M10x80	ISO 4762 - M10x80	1	
213	010003 – 213	ISO 7090 – 10,5	ISO 7090 – 10,5	ISO 7090 – 10,5	2	
214	010003 – 214	ISO 4032 - M10	ISO 4032 - M10	ISO 4032 - M10	4	
215	010003 – 215	Druckfeder	Pressure Spring	Ressort à pression	1	
216	010003 – 216	ISO 4017 - M10 x 40	ISO 4017 - M10 x 40	ISO 4017 - M10 x 40	2	
217	010003 – 217	ISO 4762 - M10x50	ISO 4762 - M10x50	ISO 4762 - M10x50	2	

V = Verschleißteile ; Wearing parts ; Pièces de rechange
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Pos.	Bestell-Nr. Order code N° cde	Benennung	Description	Dénomination	St. Pcs. Pc.	
234	010003 – 234	ISO 4762 - M6x20	ISO 4762 - M6x20	ISO 4762 - M6x20	16	
235	010003 – 235	Sicherungsscheibe S6	Thrust washer S6	Rondelle d'arrêt S6	16	
238	**010003 – 238**	**Drehmomentstütze**	**Torque support**	**Appui dynamométrique**	**1**	
239	010003 – 239	ISO 10642 - M6x12	ISO 10642 - M6x12	ISO 10642 - M6x12	2	
241	010003 – 241	ISO 4762 - M6x12	ISO 4762 - M6x12	ISO 4762 - M6x12	2	
242	010003 – 242	DIN 6796 - 6	DIN 6796 - 6	DIN 6796 - 6	2	
244	**010003 - 244**	**Brücke**	**Bridge**	**Pont**	**1**	
245	010003 – 245	ISO 4762 - M10x25	ISO 4762 - M10x25	ISO 4762 - M10x25	1	
246	010003 – 246	Sicherungsscheibe S10	Thrust washer S10	Rondelle d'arrêt S10	1	
247	010003 – 247	ISO 4762 - M8x16	ISO 4762 - M8x16	ISO 4762 - M8x16	2	
248	010003 - 248	Sicherungsscheibe S8	Thrust washer S8	Rondelle d'arrêt S8	2	
250	**010003 – 250**	**Verbindungsstück**	**Connection element**	**Raccord**	**1**	
251	010003 – 251	ISO 4762 - M8x30	ISO 4762 - M8x30	ISO 4762 - M8x30	1	
252	010003 – 252	ISO 4762 - M8x30	ISO 4762 - M8x30	ISO 4762 - M8x30	1	
253	010003 – 253	DIN 6796 - 8	DIN 6796 - 8	DIN 6796 - 8	2	
254	010003 – 254	ISO 4762 - M6x40	ISO 4762 - M6x40	ISO 4762 - M6x40	2	
264	**010003 - 264**	**Schutzblech, vorn**	**Protective plate, front**	**Tôle de protection, avant**	**1**	
265	010003 – 265	Linsenkopfschraube M6x8	Button socket head screw M6x8	Vis à tête bombée M6x8	2	
267	010003 – 267	Linsenkopfschraube M6x8	Button socket head screw M6x8	Vis à tête bombée M6x8	4	
268	**010003 – 268**	**Rückenblech**	**Back plate**	**Tôle dorsale**	**1**	
270	010003 – 270	ISO 4762 - M8x35	ISO 4762 - M8x35	ISO 4762 - M8x35	2	
271	010003 – 271	Sicherungsscheibe S8	Thrust washer S8	Rondelle d'arrêt S8	2	
272	010003 – 272	Sicherungsscheibe S6	Thrust washer S6	Rondelle d'arrêt S6	3	
273	010003 – 273	ISO 4762 - M6x16	ISO 4762 - M6x16	ISO 4762 - M6x16	1	
275	010003 – 275	Befestigungssockel	Fastening base	Base de fixation	1	
276	010003 – 276	ISO 4762 - M5x8	ISO 4762 - M5x8	ISO 4762 - M5x8	1	
277	010003 – 277	Schild Standard	Shield Standard	Taper signe	1	
278	010003 – 278	Blindniet - 3x8	Blind rivet - 3x8	Aveugle rivet - 3x8	4	
290	010003 – 295	T-Steck-verschraubung QSTF-G1/2-12	T connecting screwing QSTF-G1/2-12	Boulonnage de T-connect. QSTF-G1/2-12	2	

V = Verschleißteile ; Wearing parts ; Pièces de rechange
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Pos.	Bestell-Nr. Order code N° cde	Benennung	Description	Dénomination	St. Pcs. Pc.	
291	010003 – 295	Verl. Muffe	Extension	Allongement tétine	1	
292	010003 – 295	Mutter - G1/4“	Nut - G1/4“	Écrou - G1/4 »	1	
293	010003 – 295	L-Steck-verschraubung QSL-1/4-10	L connecting screwing QSL-1/4-10	Boulonnage de L-connect. QSL-1/4-10	2	
294	010003 – 295	Blindstopfen G1/4“	Blind plug G1/4”	Bouchon morte G1/4“	2	
300	**010003 – 300**	**Verteilerleiste, vorn**	**Distributing strip, front**	**Barre de distribution, avant**	**1**	
301	010003 – 301	Hohlschraube VT-3/8-2	Banjo bolt VT-3/8-2	Boulon à filet femelle VT-3/8-2	8	
302	010003 – 302	Dichtring O-3/8	Selaing ring O-3/8	Bague d'étanchéité O-3/8	10	
303	010003 – 303	Verschlussstopfe VSTI R1/2-EDn	Plug VSTI R1/2-ED	Bouchon de fermeture VSTI R1/2-ED	1	
304	010003 – 304	Blindstopfen B3/8“	Blind plug B3/8“	Bouchon morte B3/8“	2	
306	010003 – 306	O-Ring - 16x2	O-Ring - 16x2	O-boucle - 16x2	2	
307	010003 – 307	O-Ring - 18x2	O-Ring - 18x2	O-boucle - 18x2	6	
308	**010003 – 308**	**Verteilerleiste, hinten**	**Distributing strip, rear**	**Barre de distribution derrière**	**1**	
310	010003 – 310	2/2 Wege Magnetventil MN1H-2-3/8-MS	2/2-way solenoid valve MN1H-2-3/8-MS	2/2 Électrovanne MN1H-2-3/8-MS	2	
311	010003 – 311	Doppelnippel E1/4-1/2-M	Double nipple E1/4-1/2-M	Double raccord fileté E1/4-1/2-M	1	
312	010003 – 312	ISO 4762 - M6x35	ISO 4762 - M6x35	ISO 4762 - M6x35	1	
313	010003 – 313	Sicherungsscheibe S6	Thrust washer S6	Rondelle d'arrêt S6	1	
316	010003 – 316	Handbetätigung AHB-MD/MF/MV	Manual actuation AHB-MD/MF/MV	Service manuel AHB-MD/MF/MV	2	
317	010003 – 317	Magnetspule MSN1G-24	Magnet coil MSN1G-24	Bobine d'excitation MSN1G-24	2	
318	010003 – 318	Leitungsdose mit Leuchte MSUDS-AB1Z	Line socket incl. lamp MSUDS-AB1Z	Boîte de conduit av. luminaire MSUDS-AB1Z	2	
321	010003 – 321	L-Steckverschraubung QSL-1/8-8	L connecting screwing QSL-1/8-8	Boulonnage de L-connect. QSL-1/8-8	1	
323	**010003 – 323**	**Schlauch 8x1,25/40 lang**	**Hose 8x1,25/40 long**	**Tuyau 8x1,25/40 long**	**1**	
324	**010003 – 324**	**Verteilerleiste, rechts**	**Distributing strip, right**	**Barre de distribution, droite**	**1**	
325	**010003 – 325**	**Verschlussstopfen**	**Plug**	**Bouchon de fermeture**	**1**	

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327	010003 – 327	Reduziernippel - R1/8"x1/8"	Reducing nipple - R1/2"x1/8"	Réduire raccord fileté - R1/2x1/8	1	
328	**010003 – 328**	**T-Steckverschrau-bung**	**T connecting screwing**	**Boulonnage de T-connect.**	**1**	
329	010003 – 329	Verlängerung - R1/2"x25	Extension - R1/2"x25	Allongement - R1/2x25	1	
330	010003 – 330	Stecknippel LP-012-1 WR	Plug-in nipple LP-012-1 WR	Nippel à fichet LP-012-1 WR	1	
332	010003 – 332	Druckregelventil MS4-LRB-1/4	Pressure control valve MS4-LRB-1/4	Vanne régulative de pression MS4-LRB-1/4	1	
333	010003 - 333	Blindstopfen B1/8"	Blind plug B1/8"	Bouchon morte - B1/8"	1	
334	010003 - 334	Dichtring O-1/8	Selaing ring O-1/8	Bague d'étanchéité O-1/8	1	
335	010003 – 335	Druckregelventil MS6-R3/8-D6-OS	Prssure contol valve MS6-LR3/8-D6-OS	Vanne régulative de pression MS6-L3/8-D6-OS	1	
336	010003 – 336	O-Ring - 20x3,5	O-Ring - 20x3,5	O-boucle - 20x3,5	2	
337	010003 – 337	ELASTO Dichtring G1/2"	ELASTO sealing ring G1/2"	ELASTO Bague d'étanchéité G1/2	2	
338	010003 – 338	Abdeckkappen MS6-END	Covers MS6-END	Paillage couper MS6-END	2	
340	**010003 – 340**	**Halter**	**Holder**	**Appui**	**1**	
341	010003 – 341	ISO 4762 - M8x70	ISO 4762 - M8x70	ISO 4762 - M8x70	2	
342	010003 – 342	Sicherungsscheibe S8	Thrust washer S8	Rondelle d'arrêt S8	2	
343	**010003 – 343**	**Leiste**	**Strip**	**Barre**	**2**	
344	010003 – 344	ISO 4762 - M8x16	ISO 4762 - M8x16	ISO 4762 - M8x16	4	V
345	010003 - 345	Sicherungsscheibe S8	Thrust washer S8	Rondele d'arrêt S8	4	V
346	**010003 – 346**	**Welle**	**Shaft**	**Arbre**	**1**	
347	010003 – 347	DIN 6885 A - 8x7x45	DIN 6885 A - 8x7x45	DIN 6885 A - 8x7x45	1	
348	010003 – 348	DIN 6799 - 19	DIN 6799 - 19	DIN 6799 - 19	3	
349	**010003 – 349**	**Exzenter**	**Eccentric**	**Excentrè**	**1**	
350	**010003 – 350**	**Schwinge**	**Rocker**	**Manivelle oscillante**	**1**	
351	010003 – 351	Nadelhülse HK6032	Needle sleeve HK6032	Douille d'aguille HK6032	1	
352	010003 – 352	ISO 8735 - 16x60C	ISO 8735 - 16x60C	ISO 8735 - 16x60C	1	
353	**010003 – 353**	**Bandführungshebel**	**Strap guiding lever**	**Levier de guide de feuillard**	**1**	
354	010003 – 354	Nadelhülse HK1010	Needle sleeve HK1010	Douille d"aguille HK1010	4	
355	010003 – 355	ISO 8734 10m6x20	ISO 8734 10m6x20	ISO 8734 10m6x20	1	

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356	**010003 – 356**	**Schlepphebel**	**Towing lever**	**Levier d'entrainement**	**1**	
357	**010003 – 357**	**Hebelbrücke**	**Lever bridge**	**Levier de pont**	**1**	
358	010003 – 358	Nadelhülse HK1010	Needle sleeve HK1010	Douille d"aguille HK1010	2	
359	010003 – 359	ISO 8734 10m6x20	ISO 8734 10m6x20	ISO 8734 10m6x20	1	
360	**010003 – 360**	**Zylinderhalter**	**Cylinder holder**	**Appui de cylindre**	**1**	
361	010003 – 361	DIN 6796 - 8	DIN 6796 - 8	DIN 6796 - 8	2	
362	010003 – 362	ISO 4762 - M8x45	ISO 4762 - M8x45	ISO 4762 - M8x45	2	
363	**010003 – 363**	**Zylinderbolzen**	**Cylinder pin**	**Boulon de cylindre**	**1**	
364	010003 – 364	DIN 6799 - 4	DIN 6799 - 4	DIN 6799 - 4	1	
365	010003 – 365	DIN 6796 - 8	DIN 6796 - 8	DIN 6796 - 8	1	
366	010003 – 366	ISO 4032 - M8	ISO 4032 - M8	ISO 4032 - M8	1	
367	010003 – 367	Rundzylinder DSEU 2540 P-A	Round cylinder DSEU 2540 P-A	Cylindre à air comprimé DSEU 240 P-A	1	
368	010003 – 368	Gelenkkopf SGS-M10x1,25	Articulated head SGS-M10x1,25	Tête d'articulation SGS-M10x1,25	1	
369	010003 – 369	Näherungsschalter	Proximity switch	Détecteur de proximité	1	
370	010003 – 370	Befestigungsbausatz SMBR-25	Fastening kit SMBR-25	Jeu de pièces de fixation - SMBR-25	1	
371	010003 – 371	Steckdose E11486	Socket E11486	Prise femelle E11486	1	
372	010003 – 372	Mutter - B-M10	Nut - B-M10	Écrou - B-M10	1	
373	010003 – 373	DIN 6796 - 10	DIN 6796 - 10	DIN 6796 - 10	1	
374	010003 – 374	ISO 4762 - M10x35	ISO 4762 - M10x35	ISO 4762 - M10x35	1	
375	**010003 – 375**	**Zwischenstück**	**Separator**	**Raccord**	**1**	
376	010003 – 376	ISO 4762 - M3x40	ISO 4762 - M3x40	ISO 4762 - M3x40	2	
377	010003 – 377	Sicherungsscheibe S3	Thrust washer S3	Rondele d'arrêt S3	2	
378	010003 – 378	Schalter	Switch	Interrupteur	2	
379	010003 – 379	Kabeldose	Kabeldose	Cable box	2	
380	**010003 – 380**	**Klappenhalter**	**Flap holder**	**Clapet d'arrêt**	**1**	
381	010003 – 381	DIN 6796 - 6	DIN 6796 - 6	DIN 6796 - 6	2	
382	010003 – 382	ISO 4762 - M6x30	ISO 4762 - M6x30	ISO 4762 - M6x30	2	
383	**010003 – 383**	**Kanalklappe, rechts**	**Duct flap, right**	**Valvule du canal, droit**	**1**	**V**
384	**010003 – 384**	**Kanalklappe, links**	**Duct flap, left**	**Valvule du canal, gauchet**	**1**	**V**
385	**010003 – 385**	**Federschraube**	**Spring bolt**	**Vis à resort**	**4**	**V**
386	010003 – 386	Kegelfeder	Conical spring	Plume de cône	4	V
387	**010003 – 387**	**Verbindungslasche**	**Connecting stratch**	**Raccorde**	**1**	
388	010003 – 388	ISO 4762 - M8x35	ISO 4762 - M8x35	ISO 4762 - M8x35	1	
389	010003 – 389	ISO 4762 - M8x16	ISO 4762 - M8x16	ISO 4762 - M8x16	2	
390	010003 – 390	Sicherungsscheibe S8	Thrust washer S8	Rondelle d'arrêt S8	4	
391	**010003 – 391**	**Führungsleiste**	**Guiding strip**	**Rail de guidage**	**2**	
392	010003 – 392	ISO 4762 - M6x12	ISO 4762 - M6x12	ISO 4762 - M6x12	4	

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393	010003 – 393	DIN 6796 - 6	DIN 6796 - 6	DIN 6796 - 6	4	
394	010003 – 394	ISO 8736 - 6m6x12	ISO 8736 - 6m6x12	ISO 8736 - 6m6x12	4	
395	**010003 – 395**	**Deckplatte, rechts**	**Cover plate, right**	**Plaque de couverture droite**	**1**	
396	010003 – 396	ISO 4762 - M8x12	ISO 4762 - M8x12	ISO 4762 - M8x12	4	
397	010003 – 397	Sicherungsscheibe S8	Thrust washer S8	Rondelle d'arrêt S8	4	
398	010003 – 398	ISO 8734 - 8m6x20	ISO 8734 - 8m6x20	ISO 8734 - 8m6x20	4	
399	010003 – 399	Nadelhülse DL2516	Needle sleeve DL2516	Douille d'aguille DL2516	1	
400	**010003 – 400**	**Seitenplatte, rechts**	**Side plate, right**	**Plaque latérale**	**1**	
401	**010003 – 401**	**Seitenplatte, links**	**Side plate, left**	**Plaque latérale**	**1**	
407	**010003 – 407**	**Deckplatte, links**	**Cover plate, left**	**Plaque de couvertre**	**1**	
408	010003 – 408	ISO 4762 - M8x12	ISO 4762 - M8x12	ISO 4762 - M8x12	4	
409	010003 – 409	Sicherungsscheibe S8	Thrust washer S8	Rondelle d'arrêt S8	4	
410	010003 – 410	ISO 8734 - 8m6x20	ISO 8734 - 8m6x20	ISO 8734 - 8m6x20	4	
411	010003 – 411	Nadelhülse DL2516	Needle sleeve DL2516	Douille d'aguille DL2516	1	
412	**010003 – 412**	**Deckel**	**Cover**	**Couvercle**	**1**	
413	010003 – 413	ISO 4762 - M5x8	ISO 4762 - M5x8	ISO 4762 - M5x8	1	
414	**010003 – 414**	**Bandführung**	**Strap guidance**	**Guide du feuillard**	**1**	
415	010003 – 415	ISO 4762 - M6x16	ISO 4762 - M6x16	ISO 4762 - M6x16	2	
416	010003 – 416	DIN 6796 - 6	DIN 6796 - 6	DIN 6796 - 6	2	
417	**010003 – 417**	**Bolzen**	**Stud**	**Boulon**	**3**	
418	**010003 – 418**	**Distanzbüchse**	**Bistance bushing**	**Douille d'écartement**	**2**	
419	**010003 – 419**	**Passfeder**	**Feather key**	**Ressort d'ajustage**	**1**	
420	010003 – 420	DIN 913 - M5x8	DIN 913 - M5x8	DIN 913 - M5x8	2	
421	010003 – 421	ISO 4762 - M6x30	ISO 4762 - M6x30	ISO 4762 - M6x30	2	V
422	010003 – 422	Sicherungsscheibe S6	Thrust washer S6	Rondelle d'arrêt S6	2	V
423	010003 – 423	ISO 8734 - 6m6x16	ISO 8734 - 6m6x16	ISO 8734 - 6m6x16	2	
424	010003 – 424	Drosselventil GRLA-1/8-QS-6	Double check valve GRLA-1/8-QS-6	Soupape d'éntranglement GRLA-1/8-QS-6	2	
425	010003 – 425	DIN 6796 - 8	DIN 6796 - 8	DIN 6796 - 8	3	
428	010003 – 428	ISO 8734 - 4m6x6	ISO 8734 - 4m6x6	ISO 8734 - 4m6x6	4	
429	**010003 – 429**	**Distanzstück**	**Spacer**	**Douille d'écartement**	**2**	
430	**010003 – 430**	**Knebelhalter**	**Toggle holder**	**Support de bâillon**	**1**	
431	010003 – 431	ISO 8734 10m6x32	ISO 8734 10m6x32	ISO 8734 10m6x32	2	
432	010003 – 432	ISO 8734 0m6x20	ISO 8734 10m6x20	ISO 8734 10m6x20	2	
433	**010003 – 433**	**Knebelarm**	**Toggel arm**	**Bras de baîlon**	**2**	
434	**010003 – 434**	**Bolzen**	**Stud**	**Boulon**	**1**	

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435	010003 – 435	Untermesser, rechts	Lower cutter, right	Couteau inférieur, à droite	2	
436	010003 – 436	Untermesser, links	Lower cutter, left	Couteau inférieur, à gauche	1	
437	010003 – 437	Bolzen	Stud	Boulon	1	
438	010003 – 438	Obermesser, links	Upper cutter, left	Couteau supérieur à gauche	1	
439	010003 – 439	Druckfeder	Pressure spring	Ressort à pression	1	V
440	010003 - 440	Obermesser, rechts	Upper cutter, right	Couteau supérieur à droite	1	V
441	010003 - 441	Stützbalken	Supporting bar	Barre de sécurité	1	
442	010003 - 442	Schnittplatte, rechts	Clipping bed, reight	Plaque de coupe	1	
443	010003 - 443	Abschneidmesser	Cutter	Matrice de découpage	1	V
444	010003 – 444	Haltebolzen	Holding stud	Boulon d'arrêt	1	
445	010003 – 445	Klemmmesser, links	Clamping cutter, left	Couteau de gripper, à gauche	1	V
446	010003 – 446	Klemmmesser, rechts	Clamping cutter, right	Couteau de gripper, à droite	1	V
447	010003 – 447	Bolzen	Stud	Boulon	2	
448	010003 – 448	Führung	Guidance	Guide	1	
449	010003 – 449	ISO 4762 - M6x12	ISO 4762 - M6x12	ISO 4762 - M6x12	1	
450	010003 – 450	Sicherungsscheibe - S6	Safety disc - S6	Rondelle d'arrêt - S6	2	
451	010003 – 451	Distanzstück	Distance piece	Pièce d'écartement	2	
452	010003 – 452	Distanzstück	Distance piece	Pièce d'écartement	1	
453	010003 – 453	Schnittplatte, mitte	Cutting plate, middle	Plaque de couteau, au milieu	2	V
454	010003 – 454	ISO 4762 - M6x16	ISO 4762 - M6x16	ISO 4762 - M6x16	1	
455	010003 – 455	Schnittplatte, links	Cutting plate, left	Plaque de couteau, à gauche	2	
456	010003 – 456	ISO 4762 - M5x60	ISO 4762 - M5x60	ISO 4762 - M5x60	1	
457	010003 – 457	Obermesserstift	Upper cutter pin	Goupille de couteau supérieur	1	V
458	010003 – 458	Gegenmesser	Counter cutter	Contre-couteau	2	
459	010003 – 459	Lasche	Connecting link	Éclisse	2	
460	010003 – 460	Bolzen	Bolt	Boulon	2	
461	010003 – 461	Rolle	Roller	Bobine	2	
462	010003 – 462	DIN 8752 - 2x14	DIN 8752 - 2x14	DIN 8752 - 2x14	1	
463	010003 – 463	Schieber	Slider	Coulisseau	2	
464	010003 – 464	DIN 8752 - 6x14	DIN 8752 - 6x14	DIN 8752 - 6x14	2	
465	010003 – 465	ISO 4762 - M3x16	ISO 4762 - M3x16	ISO 4762 - M3x16	2	
466	010003 – 466	DIN 6796 - 3	DIN 6796 - 3	DIN 6796 - 3	2	
467	010003 – 467	ISO 4762 - M4x16	ISO 4762 - M4x16	ISO 4762 - M4x16	2	
468	010003 - 498	DIN 6796 - 4	DIN 6796 - 4	DIN 6796 - 4	2	
503	010003 – 503	Seitenwand komplett	Side wall, complete	Face latérale, complet	1	

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504	010003 – 504	Klemmkasten-winkel	Terminal box angle	D'angle de boîte de serrage	1	
506	010003 – 506	Zählscheibe komplett	Countig disk compl.	Disque de comptage complet	1	
513	010003 – 513	Kopfabaschaltung	Head deactivation	Arrêt de la tête	1	
514	010003 – 514	Stößel, komplett	Slide, complete	Pilon, comlet	1	
518	010003 – 518	Klemmkastenblech, komplett	Terminal box plate, complete	Plaque de boîte de serrage, complet	1	
520	010003 – 520	Multi Funktionsblock	Multi-functional block	Bloc multifonctionnel	1	
521	010003 - 521	Richtvorrichtung komplett 16 / 19mm	Straightening unit complete 5/8" / 3/4"	Unité de dressage compl. 16 / 19mm	1	
523	010003 - 523	Richtvorrichtung komplett 13mm	Straightening unit complete 1/2"	Unité de dressage compl. 13mm	1	
530	010003 – 530	Messerpaket 19mm komplet	Cutter package 19mm complete	Kit de couteaux 19mm	1	V
531	010003 – 531	Messerpaket 16mm komplet	Cutter package 16mm complete	Kit de couteaux 16mm	1	V
532	010003 – 532	Messerpaket 13mm komplet	Cutter package 13mm complete	Kit de couteaux 13mm	1	V
533	010003 – 533	Messerpaket 19mm komplet	Cutter package 19mm complete	Kit de couteaux 19mm	1	R
534	010003 – 534	Messerpaket 16mm komplet	Cutter package 16mm complete	Kit de couteaux 16mm	1	R
535	010003 – 535	Messerpaket 13mm komplet	Cutter package 13mm complete	Kit de couteaux 13mm	1	R
617	010003 – 617	L-Steckverschraubung QSLV-3/8-12	L connecting screwing QSLV-3/8-12	Boulonnage de L-connect. QSLV-3/8-12	1	
618	010003 – 618	Schnellkupplung mit Gew. LP-012-0-L1522 M22x1,5	Accouplement avec filet LP-012-0-L1522 M22x1,5	Quick-acting coupling incl. thread LP-012-0-L1522 M22x1,5	1	
619	010003 – 619	Schnellkupplung mit Tülle LP-012-0-SLO16	Quick-acting coupling incl. bushing LP-012-0-SLO16	Accouplement avec bec LP-012-0-SLO16	1	O
620	010003 – 620	Hohlschraube	Banjo bolt	Boulon à filet femelle	1	
623	010003 – 623	Dichtring O-3/8	Selaing ring O-3/8	Bague d'étanchéité O-3/8	4	
625	010003 – 625	L-Steckverschraubung QSLV-3/8-12-L	L connecting screwing QSLV-3/8-12-L	Boulonnage de L-connect. QSLV-3/8-12-L	3	
626	010003 – 626	Schlauch 12x2/600 lang	Hose 12x2/600 long	Tuyau 12x2/600 long	1	
627	010003 – 627	Schlauch 12x2/250 lang	Hose 12x2/250 long	Tuyau 12x2/250 long	2	

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629	010003 – 629	L-Steckverschraubung QSL-1/8-8	L connecting screwing QSL-1/8-8	Boulonnage de L-connect. QSL-1/8-8	1	
630	010003 – 630	L-Steckverschraubung QSLL-1/8-8	L connecting screwing QSLL-1/8-8	Boulonnage de L-connect. QSLL-1/8-8	1	
633	**010003 – 633**	**Schlauch 8x1,25/350 lang**	**Hose 8x1,25/350 long**	**Tuyau 8x1,25/350 long**	**2**	
634	**010003 – 634**	**5/3 Ventil m. Grundplatte**	**5/3 valve with plate**	**5/3 Distributeur**	**1**	
636	010003 – 636	Leitungsdose mit Leuchte	Line socket incl. lamp	Boîte de conduit av. luminaire	2	
638	010003 – 638	Hohlschraube VT-3/8-2	Banjo bolt VT-3/8-2	Boulon à filet femelle VT-3/8-2	3	
639	010003 – 639	Dichtring O-3/8	Selaing ring O-3/8	Bague d'étanchéité O-3/8	6	
641	010003 – 641	Dichtring O-1/8	Selaing ring O-1/8	Bague d'étanchéité O-1/8	2	
642	010003 – 642	Blindstopfen B1/8"	Blind plug B1/8"	Bouchon morte B1/8"	2	
643	010003 – 643	Steckverschraubung QS-1/8-8	Plug-in screwing QS-1/8 -8	Boulonnage QS-1/8-8	1	
644	010003 – 644	Blindstopfen B3/8"	Blind plug B3/8"	Bouchon morte B3/8"	2	
645	010003 – 645	Schalldämpfer 1/2"	Muffler 1/2"	Silencieux 1/2"	1	
646	010003 – 646	Hohlschraube 1/8-2-PK3	Banjo bolt 1/8-2-PK3	Boulon à filet femelle 1/8-2-PK3	4	
647	010003 – 647	3/2 Wegeventil CPE14-M1BH-3GL	3/2-way distri. control valve CPE14-M1BH-3GL	3/2 Distributeur CPE14-M1BH-3GL	1	
648	010003 – 648	3/2 Wegeventil CPE14-M1BH-3GL	3/2-way distri. control valve CPE14-M1BH-3GL	3/2 Distributeur CPE14-M1BH-3GL	1	
649	010003 – 649	Steckdose mit PVC Kabel	Socket with PVC cable	Prise femelle avec câble de PVC	2	
650	010003 – 650	Aufsatz Handbetätigung AHB-MZB	Adapter manual actuation AHB-MZB	Ensemble Service manuel AHB-MZB	2	
651	010003 – 651	Dichtring O-1/8	Selaing ring O-1/8	Bague d'étanchéité O-1/8	12	
652	010003 - 652	Schalldämpfer SD 1/8 F	Muffler SD 1/8 F	Silencieux SD 1/8 F	1	
653	010003 – 653	2/2 Wege Magnetventil MN1H-2-3/8-MS	2/2-way distri. control valve MN1H-2-3/8-MS	2/2 Distributeur MN1H-2-3/8-MS	2	

V = Verschleißteile ; Wearing parts ; Pièces de rechange
R = Austauschteile ; Replacement parts ; Pièces d'échange
B = bei Bedarf ; If necessary ; Au besoin
O = Option ; Option ; Option

Pos.	Bestell-Nr. Order code N° cde	Benennung	Description	Dénomination	St. Pcs. Pc.	
654	010003 – 654	Magnetspule MSN1G-24	Magnet coil MSN1G-24	Bobine d'excitation MSN1G-24	2	
655	010003 – 655	Leitungsdose mit Leuchte	Line socket incl. lamp	Boîte de conduit av. luminaire	2	
657	**010003 – 657**	**Schlauch 8x1,25/450 lang**	**Hose 8x1,25/450 long**	**Tuyau 8x1,25/450 long**	**1**	
658	**010003 – 658**	**3/2 Wegeventil CPE14-M1BH-3GL**	**3/2-way distri. control valve CPE14-M1BH-3GL**	**3/2 Distributeur CPE14-M1BH-3GL**	**1**	
659	**010003 – 659**	**Steckdose mit PVC Kabel**	**Socket with PVC cable**	**Prise femelle avec câble de PVC**	**1**	
665	**010003 – 665**	**Druckregelventil LRMA-1/4-QS**	**Pressure control valve LRMA-1/4-QS**	**Vanne régulative de pression LRMA-1/4-QS**	**1**	
666	**010003 – 666**	**Steckverschrau-bung QSLV-1/8-6**	**Plug-in screwing QSLV-1/8-6**	**Boulonnage QSLV-1/8-6**	**1**	
667	**010003 – 667**	**Schlauch 6x1/850 lang**	**Hose 6x1/850 long**	**Tuyau 6x1/850 long**	**2**	
670	010003 – 670	L-Steckverschraubung QSL-1/8-8	L connecting screwing QSL-1/8-8	Boulonnage de L-connect. QSL-1/8-8	2	
675	010003 – 675	Hohlschraube VT-3/8-2	Banjo bolt VT-3/8-2	Boulon à filet femelle VT-3/8-2	1	
676	**010003 – 676**	**Ventilblock**	**Valve block**	**Carcasse de douille**	**1**	
677	010003 – 677	DIN 8752 - 8x30	DIN 8752 - 8x30	DIN 8752 - 8x30	4	
678	010003 – 678	Rahmen für Einsatz Stift	Frame for insert pin	Cadre pour utilisation goupille	1	
679	010003 – 679	Rahmen für Einsatz Buchse	Frame for insert bushing	Cadre pour utilisation boîte	1	
689	**010003 – 689**	**Hutschiene**	**Top hat rail**	**Profilé chapeau**	**1**	
695	010003 – 695	Abteilungstrennplatte	Compart. separating plate	Plaque de séparât. de division	1	
696	010003 – 696	DIN 6796 -6	DIN 6796 -6	DIN 6796 -6	4	
700	010003 – 700	Schildträger	Plate carrier	Porteur de plaque	2	
701	010003 – 701	Drucktaster flach	Pushbutton flat	Capteur de pression, plat	2	
703	**010003 – 703**	**Lochblendstopfen 1**	**Aperture plug 1**	**Raccord fileté 1**	**3**	

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Pos.	Bestell-Nr. Order code N° cde	Benennung	Description	Dénomination	St. Pcs. Pc.	
704	**010003 – 704**	**Lochblendstopfen 2**	**Aperture plug 2**	**Raccord fileté 2**	**1**	
720	**010003 – 720**	**Stößelführung**	**Slide guidance**	**Guide de poussoir de soupape**	**1**	
721	010003 – 721	ISO 8750 - 6x22	ISO 8750 - 6x22	ISO 8750 - 6x22	2	
722	010003 – 722	ISO 8750 - 3x16	ISO 8750 - 3x16	ISO 8750 - 3x16	4	
723	010003 – 723	Schalter	Switch	Interrupteur	2	
724	010003 – 724	Kabeldose	Cable box	Boîte de câbles	2	
726	010003 – 726	Druckfeder	Pressure spring	Ressort à pression	1	
727	**010003 – 727**	**Scheibe**	**Disk**	**Plaque**	**1**	
728	010003 – 728	ISO 10642 - M6x12	ISO 10642 - M6x12	ISO 10642 - M6x12	1	
729	**010003 – 729**	**Platte**	**Plate**	**Plaque**	**1**	
730	010003 – 730	ISO 4762 - M8x45	ISO 4762 - M8x45	ISO 4762 - M8x45	2	
731	010003 – 731	Sicherungsscheibe S8	Thrust washer S8	Rondelle d'arrêt S8	2	
740	010003 – 740	Tüllengehäuse	Bushing housing	Carcasse de douille	1	
741	010003 – 741	Anbaugehäuse	Attached housing	Carcasse monté en ajouté	1	
742	010003 – 742	ISO 4762 - M4x12	ISO 4762 - M4x12	ISO 4762 - M4x12	4	
743	010003 – 743	Sicherungsscheibe S4	Thrust washer S4	Rondelle d'arrêt S4	4	
744	010003 – 744	ISO 4032 - M4	ISO 4032 - M4	ISO 4032 - M4	4	
745	010003 – 745	SKINTOP Verschraubung	SKINTOP screwing	SKINTOP Boulonnage	6	
746	010003 – 746	SKINDICHT Gegenmutter	SKINDICHT counternut	SKINDICHT Contreécrou	6	
747	010003 – 747	SKINTOP Verschraubung	SKINTOP screwing	SKINTOP Boulonnage	4	
748	010003 – 748	SKINDICHT Gegenmutter	SKINDICHT counternut	SKINDICHT Contreécrou	4	
749	010003 – 749	SKINTOP Mehrfachdichteins.	SKINTOP multi. sealing insert	SKINTOP Multiple très insert	3	
754	010003 – 754	SKINTOP Verschraubung	SKINTOP screwing	SKINTOP Boulonnage	1	
760	010003 – 760	ISO 4762 - M5x10	ISO 4762 - M5x10	ISO 4762 - M5x10	2	
762	010003 – 762	Einlegebrücke rot	Insert bridge red	Insérer pont rouge	1	
763	010003 – 763	Einlegebrücke blau	Insert bridge blue	Insérer pont bleu	1	
764	010003 – 764	Einlegebrücke blau	Insert bridge blue	Insérer pont bleu	1	
775	010003 – 775	Klebeschild Blitzpfeil-Dreieck	Sticker flash symbol triangle	Plaque éclair-triangle	1	
879	**010003 – 879**	**Schaltfinger**	**Schaltfinger**	**Contorl finger**	**2**	

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O = Option ; Option ; Option

Pos.	Bestell-Nr. Order code N° cde	Benennung	Description	Dénomination	St. Pcs. Pc.	
905	**010003 - 905**	**Kanalrücken, vorn**	**Kanalrücken, vorn**	**Channel back, front**	**1**	
906	**010003 - 906**	**Kanalklappe rechts vorn**	**Kanalklappe, rechts vorn**	**Channel flap, front right**	**1**	
907	**010003 - 907**	**Kanalklappe links**	**Kanalklappe, links**	**Channel flap, left**	**1**	
980	010003 – 980	Dichtring A 14x20	Sealing ring A 14x20	Bague d'étanchéité A 14x20	1	
981	010003 – 981	Dichtring 27x21x2	Sealing ring 27x21x2	Bague d'étanchéité 27x21x2	1	
1002	**010003 – 1002**	**Klemmenkasten, kompl.**	**Terminal box, complete**	**Boîte de bornes, complet**	**1**	
1007	010003 – 1007	Modul Einsatz Stift	Module insert pin	Module insertion goupille	7	
1008	010003 – 1008	Modul Einsatz Buchse	Module insert bushing	Module utilisation boîte	7	
1009	010003 – 1009	ISO 4762 - M6x12	ISO 4762 - M6x12	ISO 4762 - M6x12	4	
1010	010003 – 1010	Merfachdichteinsatz	Multiple sealing insert	SKINTOP Multiple très insert	1	
1011	010003 – 1011	Dreistock Initiatorenklemme	Dreistock switch clamp	Triple borne de connexion	29	
1014	010003 – 1014	Isolator	Insulator	Isolant	4	
1015	010003 – 1015	DIN 913 - M6x20	DIN 913 - M6x20	DIN 913 - M6x20	4	
1017	010003 – 1017	Endhalter f. Trageschiene	End holder for carrier rail	Cadre support final	2	
1018	010003 – 1018	Einlegebrücke weiß	Insertion bridge white	Insérer pont blanc	1	
1020	010003 – 1020	Crimpkontakt Buchse	Crimp contact bushing	Contact d'sertissage boîte	10	
1022	010003 – 1022	Crimpkontakt Stift	Crimp contact pin	Contact d'sertissage goupille	10	
1027	010003 – 1027	SKINDICHT Blindstopfen	SKINDICHT blind plug	SKIND. plot de remplissage	2	
1028	010003 – 1028	SKINDICHT Gegenmutter	SKINDICHT counternut	SKINDICHT Contreécrou	2	
1030	010003 – 1030	Schild „BAND EINLEGEN“	Sign “INSERT STRAP“	Plaque „INSERER FEUILLARD“	1	
1031	010003 – 1031	Schild „VERSCHLUSS“	Sign “SEAL“	Plaque „FERMETURE“	1	

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Pos.	Bestell-Nr. Order code N° cde	Benennung	Description	Dénomination	St. Pcs. Pc.	
1041	010003 – 1041	Klemmführung 19mm	Clamp guidance 19mm	Guidage de serrage 19mm	1	V
1042	010003 – 1042	Klemmführung 16mm	Clamp guidance 16mm	Guidage de serrage 16mm	1	V
1043	010003 – 1043	Klemmführung 13mm	Clamp guidance 13mm	Guidage de serrage 13mm	1	V
1052	010003 – 1052	Untermesser, rechts 16mm	Lower cutter, right 16mm	Couteau inférieur 16mm	1	V
1053	010003 – 1053	Untermesser, rechts 13mm	Lower cutter, right 13mm	Couteau inférieur 13mm	1	V
1062	010003 – 1062	Untermesser, links 16mm	Lower cutter, left 16mm	Couteau inférieur 16mm	1	V
1063	010003 – 1063	Untermesser, links 13mm	Lower cutter, left 13mm	Couteau inférieur 13mm	1	V
1072	010003 – 1072	Blockobermesser 16mm	Block upper cutter 16mm	Poinçon supérieur 16mm	1	V
1073	010003 – 1073	Blockobermesser 13mm	Block upper cutter 13mm	Poinçon supérieur 13mm	1	V
1082	010003 – 1082	Messersträger 16mm	Cutter carrier 16mm	Porte couteau 16mm	1	V
1083	010003 – 1083	Messersträger 13mm	Cutter carrier 13mm	Porte couteau 13mm	1	V
1092	010003 – 1092	Klemmesser, links 16mm	Clamping cutter, left 16mm	Couteau de maitien 16mm	1	V
1093	010003 – 1093	Klemmesser, links 13mm	Clamping cutter, left 13mm	Couteau de maitien 13mm	1	V
1102	010003 – 1102	Klemmesser, rechts 16mm	Clamping cutter, right 16mm	Couteau de maitien 16mm	1	V
1103	010003 – 1103	Klemmesser, rechts 13mm	Clamping cutter, right 13mm	Couteau de maitien 13mm	1	V
1112	010003 – 1112	Schnittplatte, mitte 16mm	Clipping bed, middle 16mm	Plaque de coupe 16mm	1	V
1113	010003 – 1113	Schnittplatte, mitte 13mm	Clipping bed, middle 13mm	Plaque de coupe 13mm	1	V
1122	010003 – 1122	Schnittplatte, links 16mm	Clipping bed, left 16mm	Plaque de coupe 16mm	1	V
1123	010003 – 1123	Schnittplatte, links 13mm	Clipping bed, left 13mm	Plaque de coupe 13mm	1	V
1130	010003 - 1130	Grundplatte	Base plate	Plaque de montage	1	

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Pos.	Bestell-Nr. Order code N° cde	Benennung	Description	Dénomination	St. Pcs. Pc.	
1131	**010003 – 1131**	**Befestigungsplatte**	**Fastening Plate**	**Plaque de fixation**	**1**	
1132	**010003 - 1132**	**Spindel**	**Spindle**	**Fuseau**	**1**	
1133	010003 - 1133	DIN 6799 - 12	DIN 6799 - 12	DIN 6799 - 12	1	
1134	**010003 - 1134**	**Spindelführung**	**Spindlefence**	**Guidage du fuseau**	**1**	
1135	010003 - 1135	ISO 4762 - M8 x 25	ISO 4762 - M8 x 25	ISO 4762 - M8 x 25	2	
1136	010003 - 1136	Sicherungsscheibe S8	Thrust washer S8	Rondelle d'arrêt S8	2	
1137	**010003 - 1137**	**Spindellager**	**Spindlebearing**	**Palier du fuseau**	**1**	
1138	010003 - 1138	ISO 4762 - M8 x 20	ISO 4762 - M8 x 20	ISO 4762 - M8 x 20	2	
1139	010003 - 1139	Sicherungsscheibe S8	Thrust washer S8	Rondelle d'arrêt S8	2	
1140	010003 - 1140	ISO 8734 5m6 x 20	ISO 8734 5m6 x 20	ISO 8734 5m6 x 20	2	
1141	**010003 - 1141**	**Spannmutter**	**Tensioningnut**	**L'écrou de serrage**	**1**	
1143	010003 - 1143	Druckfeder	Pressure Spring	Ressort à pression	1	
1144	**010003 - 1144**	**Dämpferhalter**	**Absorberholder**	**Cadre support du amortisseur**	**1**	
1145	010003 - 1145	Stoßdämpfer	Absorber	Amortisseur	2	
1146	**010003 - 1146**	**Distanzhülse**	**Spacer sleeve**	**Douille d'écartement**	**1**	
2015	**010003 - 2015**	**Lichtschranken-halter**	**Light barrier holder**	**Cadre support de cellule photo**	**1**	
2016	010003 - 2016	**Lichtschranke**	Light barrier	Cellule photo	1	
2017	010003 - 2017	**ISO 4762 - M3x16**	**ISO 4762 - M3x16**	**ISO 4762 - M3x16**	2	
2018	010003 - 2018	Sicherungsscheibe S3	Thrust washer S3	Rondelle d'arrêt S3	2	
2020	010003 - 2020	Sicherungsscheibe S5	Thrust washer S5	Rondelle d'arrêt S5	2	
2021	010003 - 2021	ISO 4762 - M5x45	ISO 4762 - M5x45	ISO 4762 - M5x45	2	
2023	010003 - 2023	Axialnadelkranz AXK 2542	Axial bearing AXK 2542	Roulement axial AXK2542	1	
2032	**010003 - 2032**	**Distanzrohr 5**	**Distance sleeve 5**	**Entretoise d'écartement 5**	**6**	
2033	010003 - 2033	Nutenstein M6	Sliding block M6	Coulisseau à rainure M6	2	
2034	010003 - 2034	ISO 8734 12m6x30	ISO 8734 12m6x30	ISO 8734 12m6x30	1	
2035	010003 - 2035	ISO 4762 - M6x25	ISO 4762 - M6x25	ISO 4762 - M6x25	1	
2038	010003 - 2038	Führungsleiste	Guidance bar	Rail de guidage	1	
2039	010003 - 2039	DIN 988 - 6x12x1	DIN 988 - 6x12x1	DIN 988 - 6x12x1	8	
2040	**010003 - 2040**	**Bandführung Oberteil**	**Strap guidance upper part**	**Guide de feuillard en haut**	**1**	
2041	010003 - 2041	ISO 7090 – 3,2	ISO 7090 – 3,2	ISO 7090 – 3,2	8	

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Pos.	Bestell-Nr. Order code N° cde	Benennung	Description	Dénomination	St. Pcs. Pc.	
2042	010003 - 2042	Rillenkugellager 623-2Z	Bearing 623-2Z	Palier à billes 623-2Z	4	
2043	**010003 - 2043**	**Bandführung Transport**	**Strap guidance transport**	**Guide de feuillard roulage**	**1**	
2044	010003 - 2044	Sicherungsscheibe S3	Thrust washer S3	Rondelle d'arrêt S3	4	
2045	010003 - 2045	ISO 4762 - M3x12	ISO 4762 - M3x12	ISO 4762 - M3x12	4	
2046	010003 - 2046	ISO 4762 - M5x40	ISO 4762 - M5x40	ISO 4762 - M5x40	1	
2047	010003 - 2047	Sicherungsscheibe S5	Thrust washer S5	Rondelle d'arrêt S4	1	
2048	**010003 - 2048**	**Bandführung**	**Strap guidance**	**Guide de feuillard**	**1**	
2049	010003 - 2049	ISO 7379 - 8-M6x30	ISO 7379 - 8-M6x30	ISO 7379 - 8-M6x30	2	
2063	010003 - 2063	Druckfeder	Pressure Spring	Ressort à pression	2	
2068	010003 - 2068	DIN 988 - 6x12x0,5	DIN 988 - 6x12x0,5	DIN 988 - 6x12x0,5	6	

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R = Austauschteile ; Replacement parts ; Pièces d'échange
B = bei Bedarf ; If necessary ; Au besoin
O = Option ; Option ; Option

4. Bestellformular / Order Form / Formulaire de commande

TITAN Umreifungstechnik GmbH & Co. KG
Ersatzteilservice / Spare parts service / Service des pièces de rechange
Berliner Str. 51 – 55
58332 Schwelm / Germany

FAX: +49 (2336) 808-208

Pos.	Bestell-Nr. Order No. N° de commande	Benennung	Description	Dénomination	Stück QTE. Pièce
1	020012-1	Nockenwerkmotor			1
⇑ Beispiel ⇑ / ⇑ Example ⇑ / ⇑ Exemple ⇑					

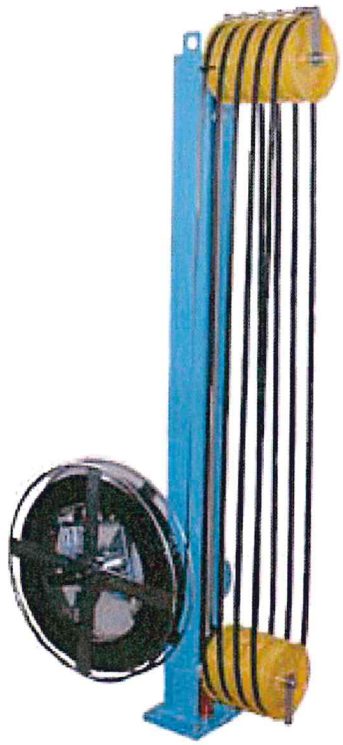
Bitte entsprechende Bandbreite ankreuzen. Please mark the required strap width. Veuillez cocher la largeur de feuillard adéquate.		
13 mm ☐	16 mm ☐	19 mm ☐
Bitte entsprechende Banddicke ankreuzen. Please mark the required strap thickness. Veuillez cocher la largeur de epaisseur du feuillard.		
0,5mm ☐	0,63mm ☐	

Firma / Company / Société	
Kontaktperson / Contact person / Personne de contact	
Straße / Street / Rue	
PLZ, Ort / Zip code, place / Code postal, ville	
Telefon / Phone / Téléphone	
Fax, E-Mail	

Datum, Date, Date Unterschrift, Signature, Signature

Das TITAN Gesamtprogramm	The TITAN range of products	La gamme de produits TITAN
Umreifungsgeräte für Stahl- und Kunststoffband	**Strapping tools** for steel and plastic strap	**Appareils de cerclage** pour feuillard d'acier et plastique
Umreifungsmaschinen und Aggregate für Stahl- und Kunststoffband	**Strapping machines and aggregates** for steel and plastic strap	**Machines et têtes de cerclage** Pour feuillard d'acier et plastique
Ballenumreifungssysteme für Stahl- und Kunststoffband	**Baling systems** for steel and plastic strap	**Systèmes de cerclage de balles** Pour feuillard d'acier et plastique
Crimpsysteme	**Crimp systems**	**Systèmes crimp**
Stanzverbinder	**Strip joining devices**	**Système d'agrafage de bobines**
Verpackungsband aus Stahl- und Kunststoffband	**Strapping** Steel and plastic strap	**Feuillard d'emballage** Acier et plastique
Verschlusshülsen	**Seals**	**Chapes**
Zubehör	**Accessories**	**Accessoires**
		TITAN Umreifungstechnik GmbH & Co. KG Postfach 440, 58317 Schwelm Berliner Straße 51-55, 58332 Schwelm Telefon: +49 (0) 23 36 / 8 08-0 Telefax: +49 (0) 23 36 / 8 08-208 E-Mail: info@titan-schwelm.de www.titan-schwelm.de **Technische Änderungen vorbehalten** **Subject to technical alterations** **Sous réserve de modifications techniques**

Operating Instructions



ABS

702 0002

Bandzuführsystem
für Stahlband

Combined uncoiling and
strap accumulator system
for steel strapping

Wichtig!
Bitte diese Anleitung nicht wegwerfen.
Der Kunde verpflichtet sich, diese Betriebsanleitung allen Bedienungs- und Servicepersonen verständlich zu machen.

Important!
Do not dispose of this manual. It is the customer's responsibility to ensure that all operators and servicemen read and understand this manual.

TITAN®
Wir halten zusammen

B 702 GB 07/11

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1. Manufacturer details

Manufacturer:

TITAN Umreifungstechnik GmbH & Co. KG
Berliner Strasse 51-55

D-58332 Schwelm

Tel.: 02336/808-0
Fax.: 02336/808-208

2. Technical Data

General:

Weight:		127 kg
Measurements:	Length	L = 1000 mm
	Width	B = 500 mm
	Height	H = 2000 mm

Uncoiler:

Motor: 3-phase motor of 0,25 kW
Gear ratio: I=30

Strap Types:
Strap widths: 12mm –19mm

Coil sizes:

Core-Ø: 410mm
Outer-Ø: 600mm
Width: 60-70mm

Accumulator:

Switches: 3 proximity switches IFM

Storing capacity: 11,5m
(Increased storing capacity via electrical control)

Strapping head travel: 4m (adjustable)
Max. pulling force required: 10 N

Wired to clamps without control.

3. GENERAL INFORMATION

These operating instructions are intended to simplify acquainting with the system and the possibilities of application for the intended purpose.
The operating instructions contain important information concerning the safe, proper and efficient use of the system. Observation of the information will help to avoid danger, reduce repairs and stoppages and increase the reliability and service life of the system.
The operating instructions must always be available at the place of operation of the system. They must be read and observed by persons working with the system. This includes operation, refilling of strapping, fault elimination and maintenance.

In addition to the operating instructions and the regulations for accident prevention effective in the country of use and place of application, the recognised technical regulations for safety and proper working must also be observed.



CAUTION!

Used where there is danger to life and health.



WARNING!
Used for danger which can cause material damage.



NOTE!
Used for general information and information which if not followed can cause faults in the operating sequence.

3.1 INFORMATION ON ENVIRONMENTAL PROTECTION

This system is being manufactured without any physical or chemical substances which could be dangerous to health. For disposal of all the parts, the governmental instructions must be observed.

4. Safety Requirements

Intended use:
The system is intended to temporarily store steel strapping being used for operating a strapping machine.

The system was designed and built for safe use as part of a strapping operation.

The system is intended for the storage of steel strapping.



Be informed!
The operating instructions must be read prior to using the system.



Protect yourself!
Always wear eye and face protection as well as safety gloves when working on the system.



Caution:
Strap ends may snap on!
Hold the upper end when cutting and do not stand in strap vanishing line



Caution:
Strap may break!
Do not stand in strap vanishing line.



Danger:
of pinching!
Do not reach between and under pulleys when in operation



Danger:
Strap package only!
Do not reach between strap and package when in operation.



Always use genuine Titan spare parts!
The use of other than Titan spares will exclude warranty and liability.



Working place

Keep your working place tidy. Disorder at the working place may lead to the risk of accidents. During strapping operations pay attention that you stand safely and have a problem-free balance to prevent the risk of falling. Never operate the unit at an unfavourable working position!



Maintenance of the unit

Just a unit being problem-free is a safe unit. Regularly check the state of your unit for defective or worn parts. Never operate a unit which has defective or worn parts. Alterations to units are strictly forbidden. Disregarding this requirement may result in serious injuries.

Warranty and liability

TITAN GmbH & Co. KG grants a guarantee of six (6) months for all strapping units sold by it. Such guarantee covers all defects of which evidence can be given that they result from faulty manufacture or material defects.

- **Wearing parts are excluded from the guarantee.**

Warranty and liability claims are excluded, if they result from one or several of the following causes:

- Unintended use of the unit.
- Incompetent mounting, commissioning, operation and maintenance of the unit.
- Operating the unit with improper safety and protective installations.
- Disregard of the instructions in these operating instructions.
- Unauthorized structural alterations to the unit.
- Faulty monitoring of unit components subjected to wear.
- Incompetently performed repair works.

Alterations to the scope of supply with the aim to improve the product without notice.

5. Description

The combined uncoiling and strap accumulator system **ABS** consists of two units, the motor driven uncoiler **ARS** and strap accumulator **BSC**.

Uncoiler ARS:

1. The uncoiler (coiler) is only designed to take up coils of steel strapping.
2. It provides the strapping necessary for the operation of the strapping machine.
3. The uncoiler motor is activated if strapping is pulled out of the accumulator by the strapping machine during a strapping operation.
4. The gear motor is activated by the program of the PLC. The motor is switched off after the accumulator has been filled with strap, i. e. on the roller slide with the pulleys having reached its lowest position.
5. A proximity switch positioned close to the strap entering pulley, (the first pulley the strap is in contact with being fed by the uncoiler) signals „uncoiler empty", if not switched on by the strap.

Accumulator BSC:

The accumulator is intended to store the quantity of strapping necessary for filling the strap channel of a strapping machine. The electric strap feeding motor of the strapping machine pulls the strap out of the accumulator with very little effort. The strap recovered during strap retraction is kept tight by a downward movement of the roller slide pulleys of the accumulator.

Indication of strap reserve (optional):

This system is giving a signal informing that a strap reserve for a limited number of strapping operations is left on the uncoiler. The number of strapping operations can be preset on the adjusting element.

The accumulator has got the following controls:

1. Accumulator full
2. Accumulator empty
3. Strap end (uncoiler empty)
4. Indication of strap reserve (optional)

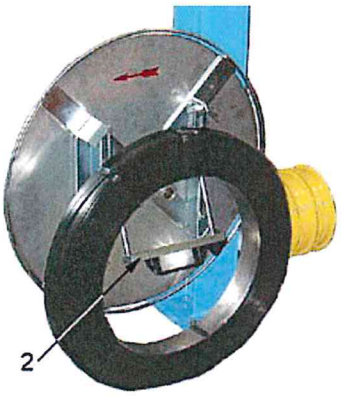
6. Operation

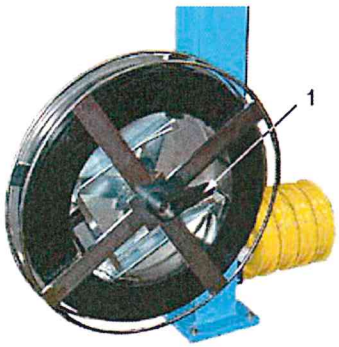
6.1 Feeding of uncoiler:

The signal "strap end uncoiler empty" having been given, the strapping cycle under way will be completed, a new strapping operation will, however, not be started. There will be a fault message for the machine.
A new coil of strapping has to be put, the plastic strapping be threaded through the accumulator and to be inserted into the strapping head.

A new coil of plastic strapping is put on the uncoiler in the following way:

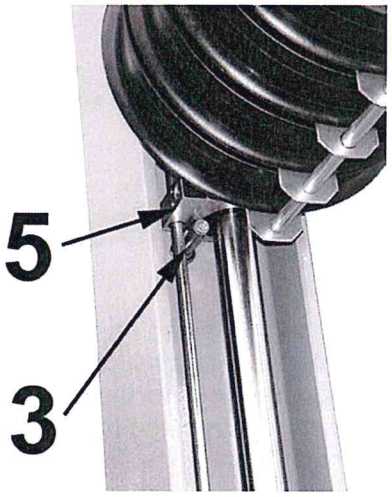
1. Unscrew **lever nut 1** take off front disc.
2. Eliminate cardboardsleeve (if any) of empty coil.
3. Check strap width of the new coil and its direction of winding before putting the coil, roll it so that it stands parallel to the flange axis. **(Direction of uncoiling, see arrow on picture)**
4. For putting the coil swivel lifting device into coil eye and pull **lever 2** upwards until the coil sits on the flange.
5. Put front disc and fix **lever nut 1**.
6. Cut-off and take away packing straps.





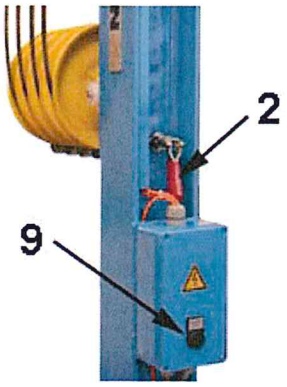
6.2 Inserting of strapping

1. Push **roller slide 5** upwards and **lever 2** (on the back side) downwards to extend **Bolt 3**. Let roller slide sit on this bolt.



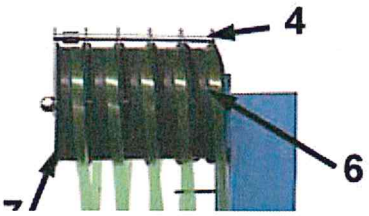
2. .**Push button 9** (filling of accumulator) to uncoil strap from strap dispenser.

3. The strap is to be inserted between top pulley and **strap guide 4**

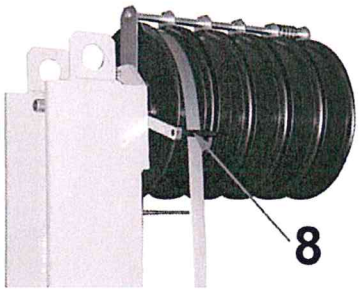


4. From the top **entering pulley 6** the strap is guided downwards to the first pulley of the roller slide. It is important that the **strap end lever 8** touches the strap.

5. The strap has to be put around all pulleys on top as well as on the roller slide.



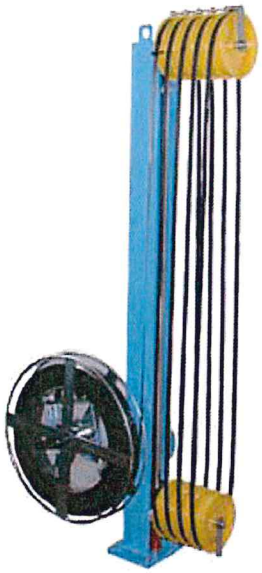
6. From the upper **exit pulley 7** of the accumulator the strap is fed to a guide pulley and from there to the strapping head.



7. Insert the strap end which should be well cut and without burr into the entering strap guide of the strapping head until feeling an obstacle.

8. Move upwards the fixing lever of the roller slide to release the roller slide.

9. Now fill the accumulator with strap so that the roller slide will sit on the stop bumper.



Important: ***Please make sure that the fixing lever 2 for the roller slide is always in its upper position when the machine is in operation, i.e. with the bolt 3 (photo 2) retracted.***

7. Maintenance

7.1 General:

- Regular and careful maintenance insures continuous avalability of the uncoiling and accumulator system **ABS**.
- Keep the uncoiling and accumulator system always clean.
- Keep guide shaft free of dirt and obstacles.



Attention!
All parts are to be inspected in regular intervals, and defective parts have to be exchanged.



Non-observation of this indication may lead to faults and cause accidents.



Do only use **genuine – Titan – spare parts!**
The use of other than Titan – spares
will exclude service and warranty.

Tool inspection!

Perform a **daily** visual inspection of the outside of the unit. The early detection of damaged parts extends the life of the unit. Replace all damaged parts **immediately** with Original Titan spare parts.

7.2 Lubricating point:

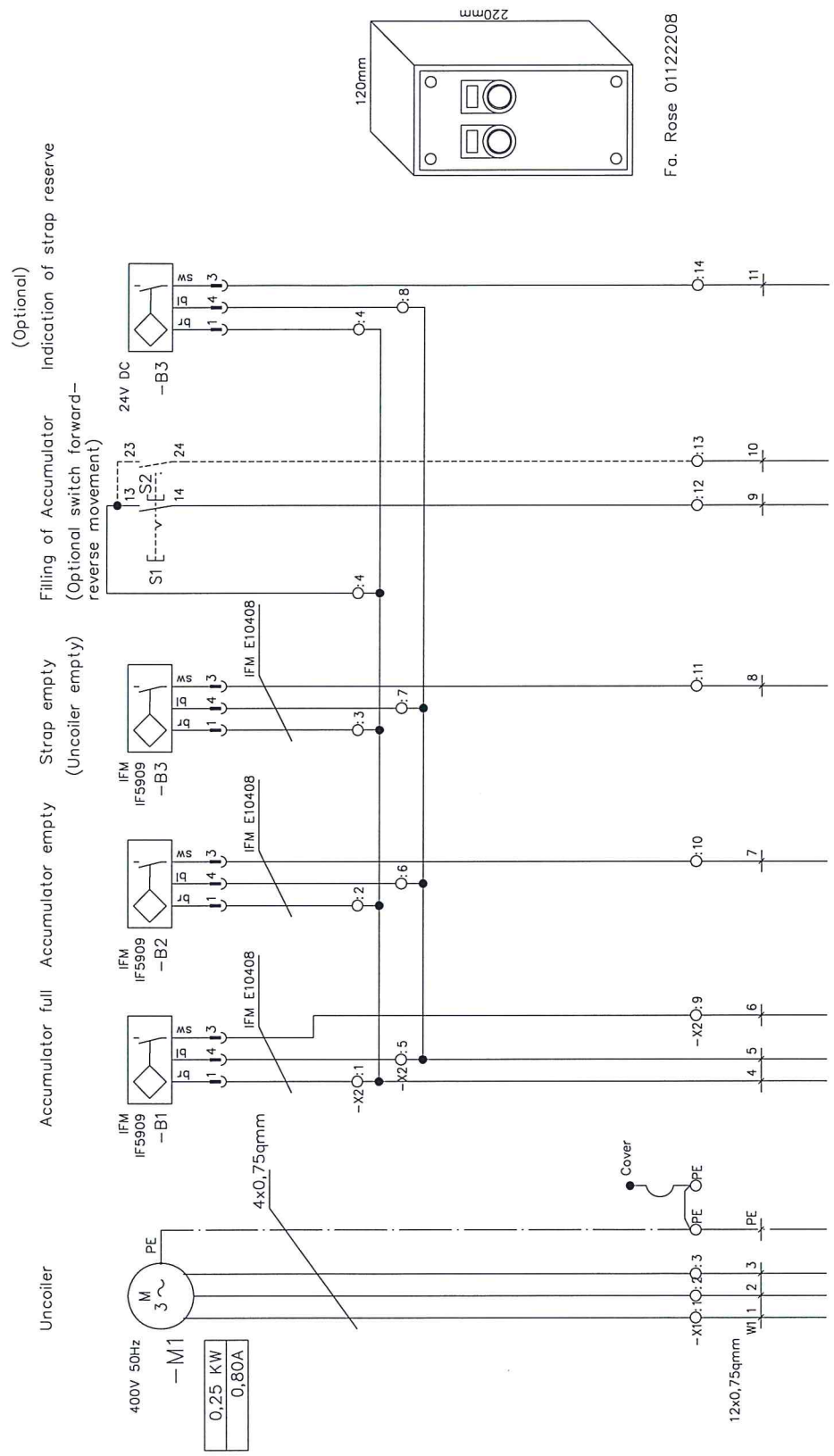
Lubricating point for set collars



For first and consecutive lubrication of set collars:
Lubricate with shaft inside until lubricant flows off.

Weekly control of lubricating oil film on guide shaft.

8. Terminals


220mm
120mm
Fa. Rose 01122208
(Optional)
Indication of strap reserve
Filling of Accumulator
(Optional switch forward-
reverse movement)
Strap empty
(Uncoiler empty)
Accumulator empty
Accumulator full
Uncoiler
24V DC
-B3
-S2
-S1
IFM E10408
IFM IF5909
-B3
-B2
-B1
-X2
-X1
4x0,75qmm
Cover
PE
M 3~
-M1
400V 50Hz
0,25 KW
0,80A
12x0,75qmm

9. Declaration of incorporation

Declaration of incorporation of partly completed machinery

in terms of the directive 2006/42/EC on machinery, Annex II B

The manufacturer

TITAN Umreifungstechnik GmbH & Co.KG
Berliner Straße 51-55

58332 Schwelm

herewith declares that the combined uncoiling and strap accumulator system for steel strapping described below

Type designation: ABS
Serial number: 702 0002

corresponds to the essential requirements of the following directives (the requirements of which have been fulfilled, see annex), as far as is possible within the scope of this delivery:

Directive 2006/42/EC on machinery
Directive 2004/108/EC relating to EMC

Used harmonised standards, published in the official journal of the EU:

EN ISO 12100-1: 2004,	Safety of machinery – Basic concepts, general principles for design – Part 1: Basic terminology, methodology
EN ISO 12100-2: 2004,	Safety of machinery – Basic concepts, general principles for design – Part 2: Technical principles and specifications
EN 1010-1:2005	Safety of machinery – Safety requirements for the design and construction of printing and paper processing machines – Part 1: General requirements (Final concept 02/2003)
EN 60204-1:2007,	Safety of machinery – Electrical equipment of machines – Part 1: General requirements

Furthermore the manufacturer declares, that the technical documentation for this partly completed machinery is compiled in accordance with part B of Annex VII and undertakes to transmit, in response to a reasoned request by the national authorities, the relevant information of the partly completed machinery in digital form.

This partly completed machinery must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of this directive and for which an EC declaration of conformity of the machinery in accordance with part A Annex II has been published.

Authorized representative for the compilation of the technical documentation:

TITAN Umreifungstechnik GmbH & Co. KG
Berliner Strasse 51-55
58332 Schwelm

Schwelm, the 08.02.2010

Peter Wilhelm Lenzen jr.
President

Annex

Requirements of Annex I from the directive 2006/42/EC which are fulfilled. The numbers relate to the parts of Annex I:

1.1.2., 1.1.3., 1.1.5., 1.2.2., 1.3.1., 1.3.2., 1.3.4., 1.5.1., 1.5.8., 1.6.1., 1.6.2., 1.6.3., 1.6.4., 1.6.5., 1.7.1., 1.7.2., 1.7.3., 1.7.4.1., 1.7.4.2., 1.7.4.3.

Das TITAN Gesamtprogramm

Umreifungsgeräte
für Stahl- und Kunststoffband

Umreifungsmaschinen/-köpfe
für Stahl- und Kunststoffband

Ballenumreifungssysteme
Stahl- und Kunststoffband

Crimpsysteme

Stanzverbinder

Verpackungsband
aus Stahl und Kunststoff

Verschlußhülsen

Zubehör

The TITAN range of products

Strapping tools
for steel and plastic strap

Strapping machines and heads
for steel and plastic strap

Baling systems
steel and plastic strap

Crimp systems

Strip joining devices

Strap
Steel and plastic

Seals

Accessories

La gamme de produits TITAN

Appareils de cerclage
pour feuillard d'acier et plastique

Machines et têtes de cerclage
pour feuillard d'acier et plastique

Systèmes de cerclage de balles
feuillard d'acier et plastique

Systèmes crimp

Système d'agrafage de bobines

Feuillard d'emballage
acier et plastique

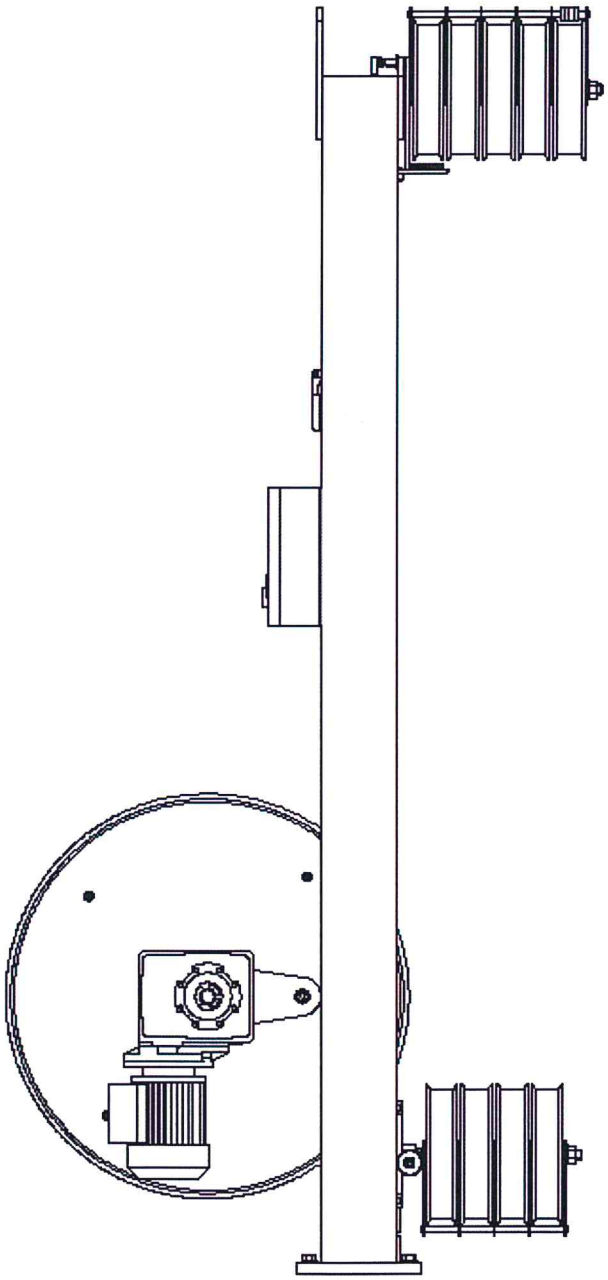
Chapes

Accessoires

TITAN Umreifungstechnik GmbH & Co. KG
Postfach 440, 58317 Schwelm
Berliner Straße 51-55, 58332 Schwelm
Telefon: +49 (0) 23 36 / 8 08-0
Telefax: +49 (0) 23 36 / 8 08-208
emailadresse: info@titan-schwelm.de
www.titan-schwelm.de

Technische Änderungen vorbehalten
Subject to technical alterations
Sous réserve de modification techniques

Spare Parts List



ABS

702 **0002**

Combined uncoiling and
strap accumulator system
for steel strapping

Accumulator	**0002 BSC**
Uncoiler	**0002 ARS**

Deflector pulley	617 **0001**
Indication of strap reserve	617 **0001**

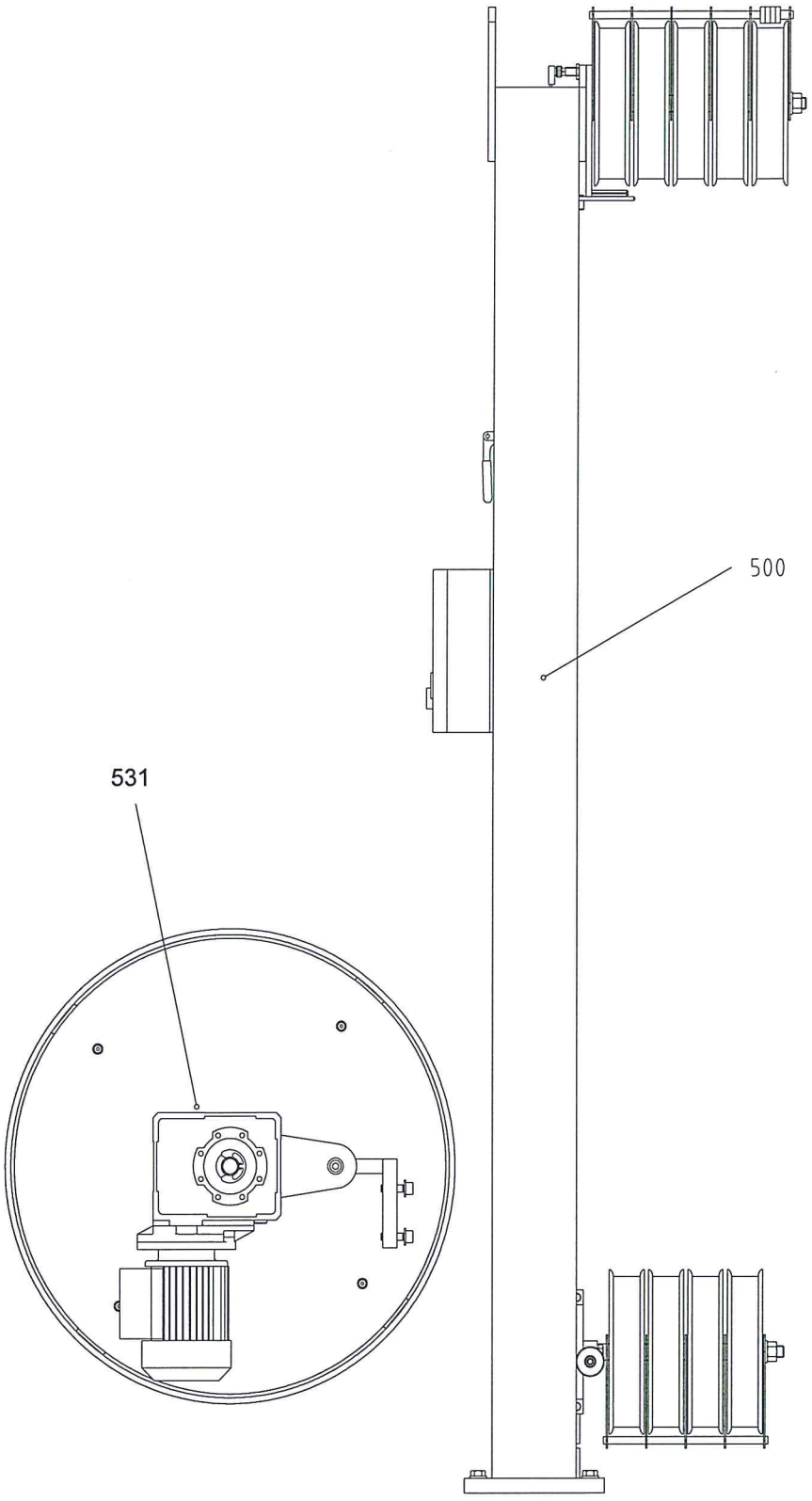
)2 GB 03/09

TITAN
Wir halten zusammen

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1 ABS



1.1 Spare part list ABS

Item.	Ordering code	Description	Dimensions	Pcs	Remarks
500	**7020002 – 500**	**Strap accumulator BSC Complete unit**	**615 0002**		
531	**7020002 – 531**	**Uncoiler ARS Complete unit**	**604 0002**		

2 Bestellformular / Order form / Formulaire de commande

TITAN Umreifungstechnik GmbH & Co. KG
Ersatzteilservice / Spare parts service / Service des pièces de rechange
Berliner Str. 51 – 55
D-58332 Schwelm

FAX: +49 (2336) 808-208

Pos.	Bestell-Nr. Order No. N° de commande	Benennung	Description	Dénomination	St. Pcs. Pc.
1	7010002 – 501	Abroller ARK-F			1
⇑ Beispiel ⇑ / ⇑ Example ⇑ / ⇑ Exemple ⇑					

Firma / Company / Société	
Kontaktperson / Contact person / Personne de contact	
Straße / Street / Rue	
PLZ, Ort / Zip code, place / Code postal, ville	
Telefon / Phone / Téléphone	
Fax, E-Mail	

Datum, Date, Date Unterschrift, Signature, Signature

TITAN

Das TITAN Gesamtprogramm

Umreifungsgeräte
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Systèmes crimp

Système d'agrafage de bobines

Feuillard d'emballage
acier et plastique

Chapes

Accessoires

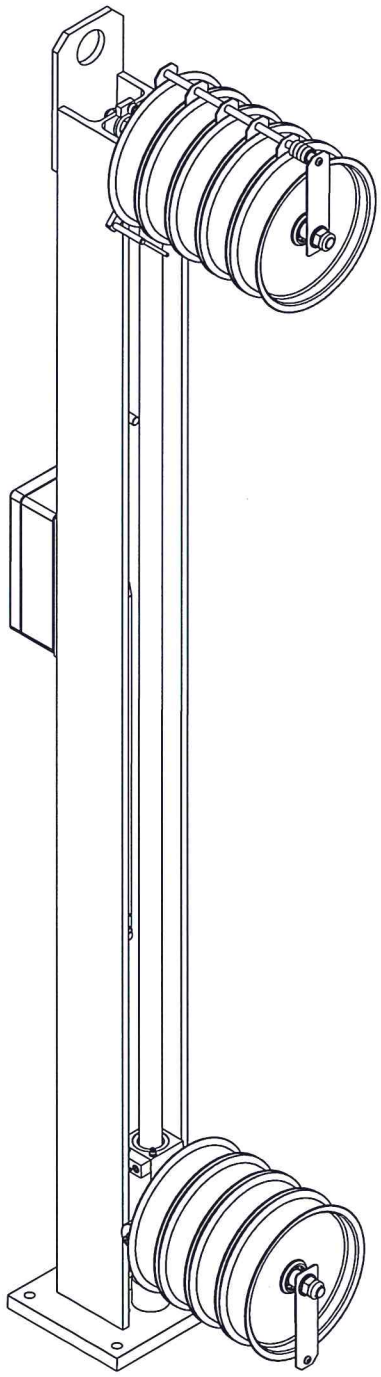
TITAN Umreifungstechnik GmbH & Co. KG
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Telefon: +49 (0) 23 36 / 8 08-0
Telefax: +49 (0) 23 36 / 8 08-208
emailadresse: info@titan-schwelm.de
www.titan-schwelm.de

Technische Änderungen vorbehalten
Subject to technical alterations
Sous réserve de modification techniques

Ersatzteilliste

Spare parts list

Liste des pièces de rechange



BSC

615 0002

Bandspeicher
für Stahlband

Accumulator
for steel strapping

Accumulateur
pour feuillard d'acier

TITAN
Wir halten zusammen

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Hinweise zur Ersatzteilbestellung
Information on how to order spare parts
Remarques pour la commande de pièces de rechange

- Bitte geben Sie zur Bestellung von Ersatzteilen die Bestellnummer an, bitte benutzen Sie das **Bestellformular am Ende dieser Ersatzteilliste.**

- When ordering spare parts please indicate the order number, please use the **order form at the end of this spare parts list.**

- Pour commander des pièces de rechange veuillez indiquer le numéro de commande, vous trouverez à la fin de cette **liste de pièces de rechange un formulaire de commande.**





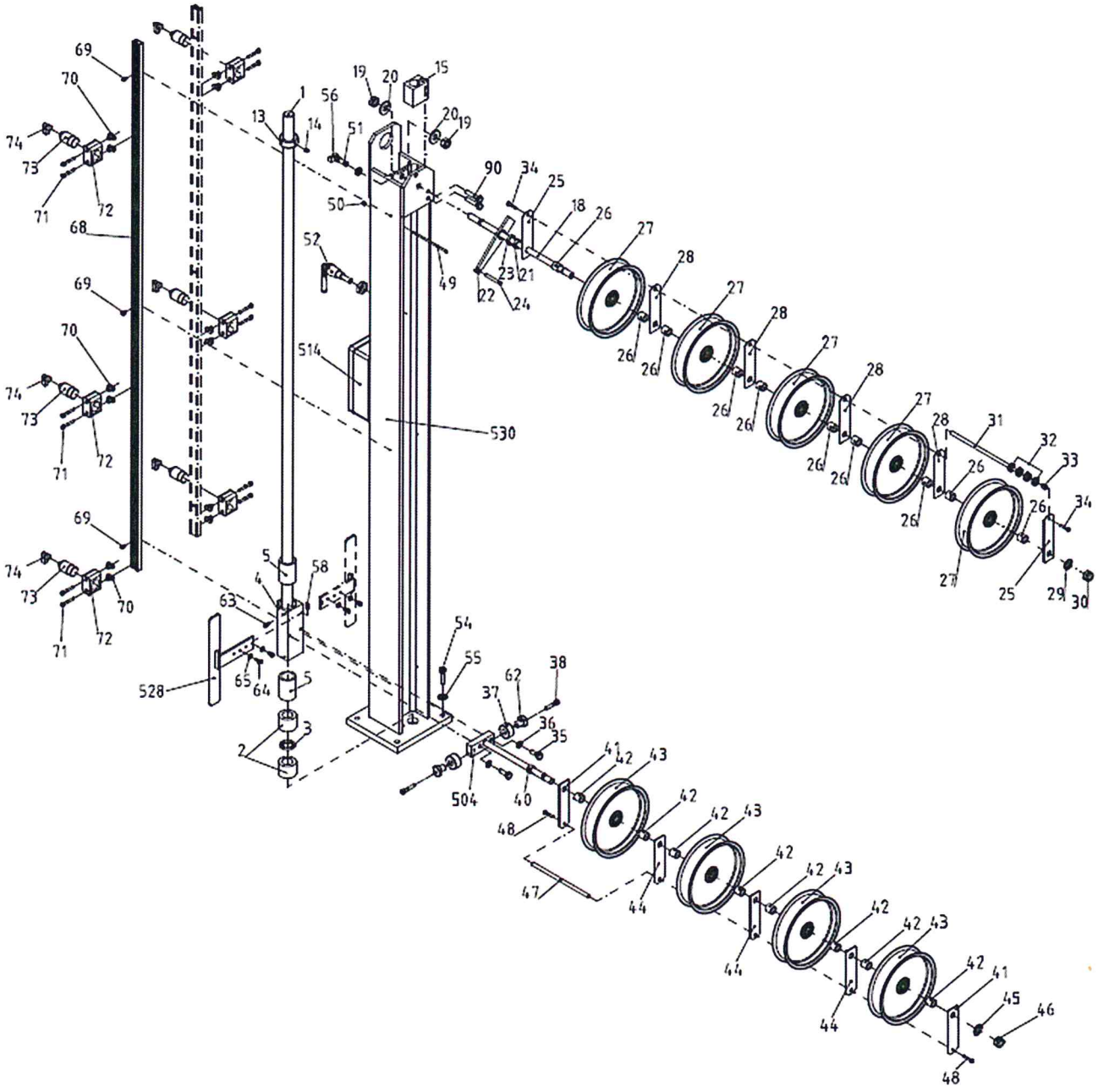


- **Verwenden Sie nur Original – TITAN – Ersatzteile!**
  Die Verwendung von anderen als TITAN – Ersatzteilen schließt Garantieleistungen und Haftpflicht aus.

- **Only use original TITAN spare parts!**
  The use of other manufacturer's parts excludes liability and warranty services.

- **Utilisez uniquement des pièces de rechange TITAN d'origine!**
  L'utilisation de pièces de rechange d'autre origine exclut toutes prestations de garantie et toute responsabilité.

1. BSC


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2. Ersatzteilliste / Spare parts list / Liste des pièces de rechange

Pos.	Bestell-Nr. Order code N° cde	Benennung	Description	Dénomination	St. Pcs. Pc.	
1	6150002-1	Führungswelle	Guide shaft	Rouleau de guidage	1	
2	**6150002-2**	**Anschlagpuffer**	**Stop bumper**	**Tampon de butée**	**2**	
3	6150002-3	Dämpfungsscheibe	Damping washer	Disque d'amortissement	1	
4	**6150002-4**	**Rollenschlitten**	**Roller slide**	**Glissoir à rouleaux**	**1**	
5	6150002-5	Kugelbuchse	Ball sleeve	Douilles sphérique	2	
13	**6150002-13**	**Endanschlag**	**Limit stop**	**Butée**	**1**	
14	6150002-14	Schraube M8 x 12 DIN 912	Screw M8 x 12 DIN 912	Vis M8 x 12 DIN 912	1	
15	**6150002-15**	**Klemmstück**	**Clamping piece**	**Elément de serrage**	**1**	
18	**6150002-18**	**Achse**	**Axle**	**Axe**	**1**	
19	6150002-19	Sechskantmutter M16 DIN 439	Hexagon nut M16 DIN 439	Écrou hexagonal M16 DIN 439	2	
20	6150002-20	Spannscheibe Ø 16 DIN 6796	Spring washer Ø 16 DIN 6796	Rondelle élastique bombée Ø 16 DIN 6796	2	
21	**6150002-21**	**Distanzhülse**	**Distance sleeve**	**Douille d'écartement**	**1**	
22	**6150002-22**	**Bandendehebel**	**Strap end lever**	**Levier pour fin de feuillard**	**1**	
23	**6150002-23**	**DU-Buchse**	**DU-sleeve**	**Douille DU**	**1**	
24	6150002-24	Spannstift Ø 8 x 60 DIN 7343	Spring pin Ø 8 x 60 DIN 7343	Goupille de serrage Ø 8 x 60 DIN 7343	1	
25	**6150002-25**	**Endblech**	**End plate**	**Plaque de bout**	**2**	
26	**6150002-26**	**Distanzhülse**	**Distance sleeve**	**Douille d'écartement**	**10**	
27	6150002-27	Spannrolle	Pulley	Roue	5	
28	**6150002-28**	**Trennblech**	**Separating plate**	**Plaque de séparation**	**4**	
29	6150002-29	Scheibe Ø 17 DIN 125-B	Disc Ø 17 DIN 125-B	Disque Ø 17 DIN 125-B	1	
30	6150002-30	Sechskantmutter M16 DIN 985	Hexagon nut M16 DIN 985	Écrou hexagonal M16 DIN 985	1	
31	**6150002-31**	**Bandführungsachse**	**Strap guide axle**	**Axe de guidage de feuillard**	**1**	
32	6150002-32	Rillenkugellager 608 2Z DIN 625	Groove ball bearing 608 2Z DIN 625	Roulement rainuré à billes 608 2Z DIN 625	4	
33	**6150002-33**	**Klemmhülse**	**Clamping sleeve**	**Douille de serrage**	**1**	
34	6150002-34	Linsenschraube M6 x 10 Unbrako	Lens head screw M6 x 10 Unbrako	Vis à tête conique bombée M6 x 10 Unbrako	2	
35	6150002-35	Sechskantschraube M10 x 30 DIN 933	Hexagon screw M10 x 30 DIN 933	Vis à tête hexagonale M10 x 30 DIN 933	2	
36	6150002-36	Scheibe Ø 10,5 DIN 125	Disc Ø 10.5 DIN 125	Disque Ø 10,5 DIN 125	2	
37	**6150002-37**	**Laufrolle**	**Roller**	**Galet de roulement**	**2**	

V = Verschleißteile ; Wearing parts ; Pièces d'usure
R = Austauschteile ; Replacement parts ; Pièces d'échange
B= bei Bedarf ; if necessary ; au besoin
O= Option ; Option ; Option

Pos.	Bestell-Nr. Order code N° cde	Benennung	Description	Dénomination	St. Pcs. Pc.	
38	6150002-38	Schraube M8 x 30 DIN 912	Screw M8 x 30 DIN 912	Vis M8 x 30 DIN 912	2	
40	**6150002-40**	**Distanzhülse, kurz**	**Distance sleeve, short**	**Douille d'écartement, court**	**1**	
41	**6150002-41**	**Endblech**	**End plate**	**Plaque de bout**	**2**	
42	**6150002-42**	**Distanzhülse**	**Distance sleeve**	**Douille d'écartement**	**8**	
43	6150002-43	Spannrolle	Pulley	Roue	4	
44	**6150002-44**	**Trennblech**	**Separating plate**	**Plaque de séparation**	**3**	
45	6150002-45	Scheibe Ø 17 DIN 125-B	Disc Ø 17 DIN 125-B	Disque Ø 17 DIN 125-B	1	
46	6150002-46	Sechskantmutter M16 DIN 985	Hexagon nut M16 DIN 985	Écrou hexagonal M16 DIN 985	1	
47	**6150002-47**	**Bandführungsachse, kurz**	**Strap guide axle, short**	**Axe de guidage de feuillard, court**	**1**	
48	6150002-48	Linsenschraube M6 x 10 Unbrako	Lens head screw M6 x 10 Unbrako	Vis à tête conique bombée M6 x 10 Unbrako	2	
49	**6150002-49**	**Gegenhalter**	**Back stop**	**Contre-bouterolle**	**1**	
50	6150002-50	Sechskantmutter M5 DIN 985	Hexagon nut M5 DIN 985	Écrou hexagonal M5 DIN 985	1	
51	6150002-51	Initiator (IFM) M12 x 1	Initiator (IFM) M12 x 1	Commutateur capacitif (IFM) M12 x 1	1	
52	6150002-52	Feststellhebel	Fixing lever	Levier de blocage	1	
54	6150002-54	Sechskantschraube M12 x 40 DIN 933	Hexagon screw M12 x 40 DIN 933	Vis à tête hexagonale M12 x 40 DIN 933	4	
55	6150002-55	Spannscheibe Ø 12 DIN 6796	Spring washer Ø 12 DIN 6796	Rondelle élastique bombée Ø 12 DIN 6796	4	
56	6150002-56	Stecker (IFM)	Plug (IFM)	Connecteur (IFM)	1	
58	6150002-58	Schmiernippel M8 x 1 71412	Greasing device M8 x 1 71412	Graisseur M8 x 1 71412	1	
62	**6150002-62**	**Exzenterbuchse**	**Eccentric bush**	**Coussinet excentrique**	**2**	
63	6150002-63	Schraube M6 x 8 DIN 912	Screw M6 x 8 DIN 912	Vis M6 x 8 DIN 912	1	
64	6150002-64	Schraube M6 x 12 DIN 912	Screw M6 x 12 DIN 912	Vis M6 x 12 DIN 912	2	
65	6150002-65	Spannscheibe Ø 6 DIN 6796	Spring washer Ø 6 DIN 6796	Rondelle élastique bombée Ø 6 DIN 6796	2	
68	**6150002-68**	**Tragschiene STAUFF TS 14**	**Mounting rail STAUFF TS 14**	**Profilé support STAUFF TS 14**	**1**	
69	6150002-69	Schraube M5 x 8 DIN 6912	Screw M5 x 8 DIN 6912	Vis M5 x 8 DIN 6912	3	

V = Verschleißteile ; Wearing parts ; Pièces d'usure **B=** bei Bedarf ; if necessary ; au besoin
R = Austauschteile ; Replacement parts ; Pièces d'échange **O=** Option ; Option ; Option

Pos.	Bestell-Nr. Order code N° cde	Benennung	Description	Dénomination	St. Pcs. Pc.	
70	6150002-70	Schienenmutter STAUFF SM	Rail nut STAUFF SM	Écrou de rail STAUFF SM	6	
71	6150002-71	Schraube M6 x 40 DIN 912	Screw M6 x 40 DIN 912	Vis M6 x 40 DIN 912	6	
72	6150002-72	Rohrschelle STAUFF PA 430	Pipe clamp STAUFF PA 430	Bride d'attache STAUFF PA 430	3	
73	6150002-73	Initiator IFM II 5430	Initiator IFM II 5430	Commutateur capacitif IFM II 5430	3	
74	6150002-74	Stecker IFM E 10509	Plug IFM E 10509	Connecteur IFM II 10509	3	
80	**6150002-80**	**Bodenplatte**	**Base plate**	**Plaque de fond**	**1**	
90	6150002-90	Senkschraube M10 x 55 ISO 10642	Countersunk screw M10 x 55 ISO 10642	Vis noyée M10 x 55 ISO 10642	2	
504	**6150002-504**	**Rollenhalterung**	**Roller holding device**	**Fixage à rouleaux**	**1**	
507	**6150002-507**	**Bandvorratsanzeige**	**Indication of strap reserve**	**Indication de réserve de feuillard**	**1**	
511	**6150002-511**	**Umlenkrolle**	**Deflector pulley**	**Poulie de déviation**	**1**	
514	**6150002-514**	**Schaltkasten**	**Switch box**	**Coffret de commande**	**1**	
528	**6150002-528**	**Schaltfahne kpl.**	**Switch lug cpl.**	**Talon commutateur**	**1**	
530	**6150002-530**	**Ständer**	**Column**	**Support**	**1**	

V = Verschleißteile ; Wearing parts ; Pièces d'usure
R = Austauschteile ; Replacement parts ; Pièces d'échange
B= bei Bedarf ; if necessary ; au besoin
O= Option ; Option ; Option

Bestellformular / Order form / Formulaire de commande

TITAN Umreifungstechnik GmbH & Co. KG
Ersatzteilservice / Spare parts service / Service des pièces de rechange
Berliner Str. 51 – 55
D-58332 Schwelm

FAX: +49 (2336) 808-208

Pos.	Bestell-Nr. Order No. N° de commande	Benennung	Description	Dénomination	St. Pcs. Pc.
1	6150002-1	Führungswelle	Guide shaft	Rouleau de guidage	1
		⇑ Beispiel ⇑	⇑ Example ⇑	⇑ Exemple ⇑	

Firma / Company / Société	
Kontaktperson / Contact person / Personne de contact	
Straße / Street / Rue	
PLZ, Ort / Zip code, place / Code postal, ville	
Telefon / Phone / Téléphone	
Fax, E-Mail	

Datum, Date, Date Unterschrift, Signature, Signature

Das TITAN Gesamtprogramm	The TITAN range of products	La gamme de produits TITAN
Umreifungsgeräte für Stahl- und Kunststoffband	**Strapping tools** for steel and plastic strap	**Appareils de cerclage** pour feuillard d'acier et plastique
Umreifungsmaschinen und Aggregate für Stahl- und Kunststoffband	**Strapping machines and aggregates** for steel and plastic strap	**Machines et têtes de cerclage** Pour feuillard d'acier et plastique
Ballenumreifungssysteme für Stahl- und Kunststoffband	**Baling systems** for steel and plastic strap	**Systèmes de cerclage de balles** Pour feuillard d'acier et plastique
Crimpsysteme	**Crimp systems**	**Systèmes crimp**
Stanzverbinder	**Strip joining devices**	**Système d'agrafage de bobines**
Verpackungsband aus Stahl- und Kunststoffband	**Strapping** Steel and plastic strap	**Feuillard d'emballage** Acier et plastique
Verschlusshülsen	**Seals**	**Chapes**
Zubehör	**Accessories**	**Accessoires**

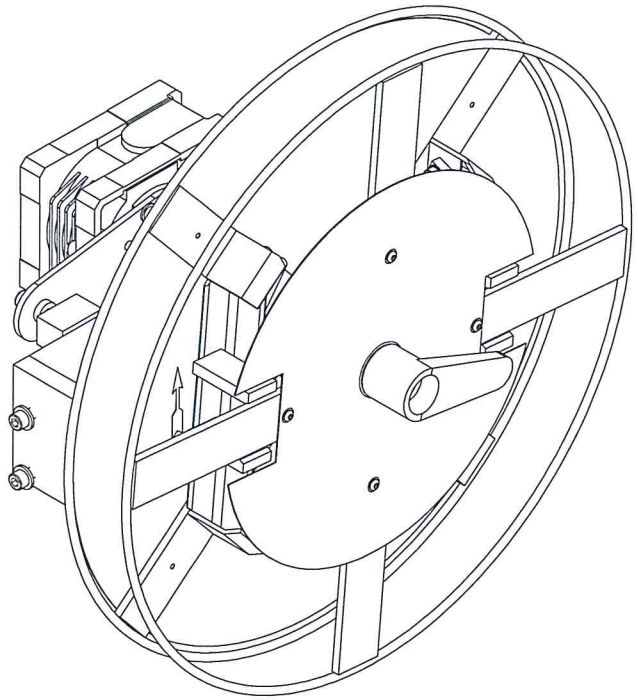
TITAN Umreifungstechnik GmbH & Co. KG
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www.titan-schwelm.de

Technische Änderungen vorbehalten
Subject to technical alterations
Sous réserve de modifications techniques

Spare Parts List

Ersatzteilliste

Liste des pièces de rechange



ARS

604 **0002**

Uncoiler
for steel strapping

TITAN
Wir halten zusammen

E 604 GB 11/11

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1 ARS

1.1 Spare parts ARS

Pos.-Nr.	Bestell-Nr.	Benennung	Abmessung	Stück	Bemerkung
100	6040002 – 100	Flange block		2	
102	6040002 – 102	Cap screw	M 8 x 16	6	
103	6040002 – 103	Tension washer	8	6	
116	6040002 – 116	Cap screw	M 6 x 20	3	
117	6040002 – 117	Disk	6,4	3	
122	6040002 – 122	Lever nut		1	
123	6040002 – 123	Cap screw	M 10 x 30	2	
124	6040002 – 124	Tension washer	10	2	
128	6040002 – 128	Cap screw	M 8 x 30	1	
129	6040002 – 129	Disk	8,4	3	
130	6040002 – 130	Tension washer	8	3	
131	6040002 – 131	PVC – Arrow		1	
132	6040002 – 132	Tension washer	6	3	
133	6040002 – 133	**Cover**		**2**	
134	6040002 – 134	Lens head screw	M 6 x 10	8	
135	6040002 – 135	Tension washer	6	8	
136	6040002 – 136	Cap srew	M 8 x 25	2	
137	6040002 – 137	Disk	8,4	2	
138	6040002 – 138	Hexagon nut	M 8	2	
139	6040002 – 139	Handle	137 x 26 x 41	1	
140	6040002 – 140	Thrust washer	S 8	2	
141	6040002 – 141	Cap srew	M 8 x 16	2	
142	6040002 – 142	**Fixing tube**	**Ø 55 x 5**	**1**	
143	6040002 – 143	Threaded pin	M 6 x 8	1	
145	**6040002 – 145**	**Drive shaft**		**1**	
146	6040002 – 146	Tension pin	8x50	2	
147	6040002 – 147	Torque support		1	
148	6040002 – 148	Cap screw	M8x16	6	
149	6040002 – 149	Tension washer	8	6	
150	6040002 – 150	Cap screw	M10x50	1	
151	6040002 – 151	Hexagon nut	M10	1	
152	6040002 – 152	Thrust washer	24	1	
153	6040002 – 153	Worm gear		1	
154	6040002 – 154	Three phase motor		1	
155	6040002 – 155	Feather key		2	
506	**6040002 – 506**	**Clamping sleeve**		**1**	
517	**6040002 – 517**	**Steel flange rear**		**1**	
518	**6040002 – 518**	**Lever**		**1**	
519	**6040002 – 519**	**Steel flange front**		**1**	
524	**6040002 – 524**	**Holder**		**1**	
525	**6040002 – 525**	**Worm gear a. Motor kompl.**		**1**	

E 604 GB 03/09

2 Order form

TITAN Umreifungstechnik GmbH & Co. KG
Ersatzteilservice / Spare parts service / Service des pièces de rechange
Berliner Str. 51 – 55
D-58332 Schwelm
FAX: +49 (2336) 808-208

Pos.	Bestell-Nr. Order No. N° de commande	Benennung	Description	Dénomination	St. Pcs. Pc.
100	6040002 – 100		Flange block		1
⇑ Beispiel ⇑ / ⇑ Example ⇑ / ⇑ Exemple ⇑					

Bitte entsprechende Bandbreite ankreuzen Please tick off the relevant strap width desired Veuillez cocher la largeur de feuillard adéquate			
9 mm ☐	12 mm ☐	16 mm ☐	19 mm ☐
Bitte entsprechende Bandqualität ankreuzen Please tick off the relevant strap quality desired Veuillez cocher la qualité de feuillard adéquate			
PP ☐		PET ☐	

Firma / Company / Société	
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Fax, E-Mail	

Datum, Date, Date Unterschrift, Signature, Signature

TITAN

Das TITAN Gesamtprogramm

Umreifungsgeräte
für Stahl- und Kunststoffband

Umreifungsmaschinen/-köpfe
für Stahl- und Kunststoffband

Ballenumreifungssysteme
Stahl- und Kunststoffband

Crimpsysteme

Stanzverbinder

Verpackungsband
aus Stahl und Kunststoff

Verschlußhülsen

Zubehör

The TITAN range of products

Strapping tools
for steel and plastic strap

Strapping machines and heads
for steel and plastic strap

Baling systems
steel and plastic strap

Crimp systems

Strip joining devices

Strap
Steel and plastic

Seals

Accessories

La gamme de produits TITAN

Appareils de cerclage
pour feuillard d'acier et plastique

Machines et têtes de cerclage
pour feuillard d'acier et plastique

Systèmes de cerclage de balles
feuillard d'acier et plastique

Systèmes crimp

Système d'agrafage de bobines

Feuillard d'emballage
acier et plastique

Chapes

Accessoires

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emailadresse: info@titan-schwelm.de
www.titan-schwelm.de

Technische Änderungen vorbehalten
Subject to technical alterations
Sous réserve de modification techniques

Stck	Benennung	DIN	Werkstoff	Abmessung	Länge	Obfl	Pos.	EDV-Nr.	Menge	T
	Designation		Material	Size	Length	Surf.		Code-no.	Quantity	EK
				mm	mm					F
	Standard components									
1	**Strapping head VS11-L**	**No.: 73095**		Strap: **16x0.5 mm**				**4802010302**	**1**	**T**
	Control voltage 24VDC									
	Note:									
	The subassembly 4802028020 " head on package " will be separately mounted by the manufacturer and the proximity switches B7 and B8 wired.									
1	Strap dispenser unit ABS incl. base plate 4580201460,							**7670200002**	**1**	**T**
	Attention: mirror-image mounted (dispenser round plate RH side)									
4	Shear connector cartridge M16 UPAT-UKA-3							**01999300160**	**4**	**T**
4	UPAT anchor rod with washer and nut M16/190							**01999316190**	**4**	**T**

Stck	Benennung	DIN	Werkstoff	Abmessung	Länge	Obfl	Pos.	EDV-Nr.	Menge	T
	Designation		Material	Size	Length	Surf.		Code-no.	Quantity	EK
				mm	mm					F
	Subassembly: Pneum. strap clamp		13-19mm					**4547000574**		
1	Pressure spring	Gutekunst		D-252A-30				**1620002521**	1	T
1	Compact cylinder	Festo						**09940156015**	1	T
	156015 ADVU-40-10-P-A-S2									
1	Screw	TITAN						**580200170**	1	T
1	Cover		1.0037			galvd.		**4540009608**	1	T
4	Hex. socket head cap screw	912	8.8	M6x60		galvd.		**01001060610**	4	T
4	Washer	125		B 6.4		galvd.		**01302064010**	4	T
1	Top part		1.0037			galvd.		**4540009609**	1	T
1	Bottom part		1.0037			galvd.		**4540009610**	1	T
4	Hex. socket head cap screw	912	8.8	M6x40		galvd.		**01001060410**	4	T
1	Intermediate piece		1.0037			galvd.		**4540009611**	1	T
1	Spring seat		1.0037			br		**4540009612**	1	T
1	Solenoid valve	Festo	196929 CPE14-M1BH-3GL-1/8					**09942000120**	1	T
1	Socket cable	Festo	193689 KMYZ-9-24-5-LED-PUR-B					**09942000139**	1	T
2	Silencer	Festo	161419 UC-1/8					**9942400025**	2	T

Stck	Benennung	DIN	Werkstoff	Abmessung	Länge	Obfl	Pos.	EDV-Nr.	Menge	T
	Designation		Material	Size	Length	Surf.		Code-no.	Quantity	EK
				mm	mm					F
	Subassembly: Machine frame							**4547001190**		
1	Framework		welded part			7038		**4540017687**	1	F
4	Hex. screw	933	8.8	M16 x 60		galvd.			4	T
4	Hex. nut	934	8	M16		galvd.		**01408160002**	4	T
4	Shear connector cartridge M16 UPAT-UKA-3							**01999300160**	4	T
4	UPAT anchor rod with washer and nut M16/190							**01999316190**	4	T
4	Combined bearing with	WINKEL		APO.4054				**01599014054**	4	T
	welded flange AP 0									
8	Spacer plate t=1,0mm	WINKEL		DS-0-1,0					8	EK
16	Hex. socket head cap screw	912	8.8	M8 x 30		galvd.		**01001080318**	16	T
16	Conical spring washer	6796	FSt	8		A4A		**01340008010**	16	T
1	Travelling rail, right					7038		**4540017690**	1	F
1	Travelling rail, left					7038		**4540017691**	1	F
1	Plate					7038		**4540017692**	1	F
1	Plate					7038		**4540017693**	1	F
1	Strut					7038		**4540017696**	1	F
16	Hex. socket head cap screw	912	8.8	M8 x 20		galvd.		**01001080210**	16	T
2	Hex. socket head cap screw	912	8.8	M8 x 30		galvd.		**01001080318**	2	T
16	Conical spring washer	6796	FSt	8		A4A		**01340008010**	16	T
1	Chain tray					7038		**4540006660**	1	F
2	Hex. socket head cap screw	912	8.8	M8 x 20		galvd.		**01001080210**	2	T
2	Conical spring washer	6796	FSt	8		A4A		**01340008010**	2	T
1	Energy chain (made of plastic)								1	EK
	IGUS Type: E300.075.100.0; 14 links									
	Fixed end and moving end connection (compl. kit 3075. 12PZB)									
	Bending radius KR = 100 mm; chain length LK = 938 mm									
2	Hex. socket head cap screw	912	8.8	M8 x 16		galvd.		**01001080170**	2	T
2	Hex. socket head cap screw	912	8.8	M8 x 25		galvd.		**01001080268**	2	T
4	Conical spring washer	6796	FSt	8		A4A		**01340008010**	4	T
2	Support		welded part			7038		**4540009636**	2	F
4	Hex. screw	933	8.8	M8 x 30		galvd.		**1013080302**	4	T
4	Conical spring washer	6796	FSt	8		A4A		**1340008010**	4	T
4	Hex. nut	934	8	M8		galvd.		**1408080014**	4	T

Stck	Benennung	DIN	Werkstoff	Abmessung	Länge	Obfl	Pos.	EDV-Nr.	Menge	T
	Designation		Material	Size	Length	Surf.		Code-no.	Quantity	EK
				mm	mm					F
1	Pneumatic cylinder	Festo	1922634 DNC-50-300-PPV-A						1	EK
1	Clevis	Festo	6146 SG-M16x1,5						1	EK
1	Trunnion mounting kit	Festo	163527 ZNCM-50						1	EK
2	Proximity switch	Festo	175484 SMT-8-PS-S-LED-24-B					09940175484	2	T
2	Socket with cable 5m	Festo	159421 SIM-M8-3GD-5-PU					9940159421	2	T
2	One-way flow control valve	Festo	162968 GRLA-1/4-QS-8-RS-B						2	EK
1	Head support bracket		welded part			7038		4540017701	1	F
4	Hex. socket head cap screw	912	8.8	M10 x 25		galvd.		01001080210	4	T
4	Conical spring washer	6796	FSt	10		A4A		01340010010	4	T
1	Support, head deactivation		welded part			7038		4540017703	1	F
4	Hex. socket head cap screw	912	8.8	M8 x 25		galvd.		01001080268	4	T
4	Conical spring washer	6796	FSt	8		A4A		01340008010	4	T
2	Bush					galvd.		4540017671	2	F
1	Tension roller	INA	RSR.B13.159.LO			7038		1594104830	1	T
1	Hex. socket head cap screw	912	8.8	M12x80		galvd.		1001120805	1	T
2	Conical spring washer	6796	FSt	12		A4A		1340012010	2	T
1	Hex. nut	934	8	M12		galvd.		1408120008	1	T
2	Grooved ball bearing	625	SKF	6301-2Z				1501630103	2	T
1	Plate					7038		4540017672	1	F
1	Bush					galvd.		4540009846	1	T
1	Hex. socket head cap screw	912	8.8	M12x60		galvd.		1001120610	1	T
1	Conical spring washer	6796	FSt	12		A4A		1340012010	1	T
1	Hex. nut	934	8	M12		galvd.		1408120008	1	T
2	E-box mounting bracket					7038		4540014078	2	F
4	Counter-sunk head screw	7991	8.8	M8 x 16				01005080161	4	T
4	Hex. socket head cap screw	912	8.8	M8 x 12		galvd.		01001080130	4	T
4	Conical spring washer	6796	FSt	8		A4A		01340008010	4	T
1	Strap clamp support		welded part					4540017704	1	T
4	Hex. socket head cap screw	912	8.8	M8 x 25		galvd.		01001080268	4	T
4	Conical spring washer	6796	FSt	8		A4A		01340008010	4	T

Stck	Benennung	DIN	Werkstoff	Abmessung	Länge	Obfl	Pos.	EDV-Nr.	Menge	T
	Designation		Material	Size	Length	Surf.		Code-no.	Quantity	EK
				mm	mm					F
4	Hex. socket head cap screw	912	8.8	M5 x 20		galvd.		**01001050215**	**4**	**T**
4	Conical spring washer	6796	FSt	5		A4A		**01340005010**	**4**	**T**
	Subassembly: Pneumatic accessories						Plan	**4545000388**		
1	Air service unit	Festo					1		**1**	**EK**
	531030 MSB6-1/2:C4:J2:F1:D4:F3-WP									
1	Blank plug	Festo		3571 B-1/2			1		1	**EK**
1	Angled socket	Festo		164274 PEV-1/4-WD-LED-24			1		1	**EK**
1	Plug socket	Festo		151687 MSSD-EB			1		1	**EK**
1	Illum. seal	Festo		151717 MEB-LD-12-24DC			1		1	**EK**
1	Pressure regulating valve	Festo		153494 LRMA-1/4-QS-8			9		**1**	**EK**
1	Solenoid valve	Festo		170251 CPE18-M1H-5/3B-1/4			5		**1**	**EK**
1	Solenoid valve	Festo		170247 CPE18-M1H-5/3G-1/4			6		**1**	**EK**
4	Socket cable	Festo		151689 KMEB-1-24-5-LED			7	**08849903871**	**4**	**T**
4	Silencer	Festo		2316 U-1/4			8		**4**	**EK**
1	Air gun	Festo		35528 LBP-1/4			3	**9942091000**	**1**	**EK**
1	Air nozzle	Festo		184319 LPZ-RB-150			3	**9942091010**	**1**	**EK**
1	Spiral-wound tube	Festo		19796 PPS-6-7,5-1/4-BL			2		**1**	**EK**
1	Air oiler	Festo		192576 LOE-D-MIDI			15		**1**	**EK**
1	Mounting bracket	Festo		159593 HFOE-D-MIDI/MAXI			15		**1**	**EK**

Stck	Benennung	DIN	Werkstoff	Abmessung	Länge	Obfl	Pos.	EDV-Nr.	Menge	T
	Designation		Material	Size	Length	Surf.		Code-no.	Quantity	EK
				mm	mm					F
	Subassembly: Lance							**4547001164**		
1	Lance channel		welded part			7038		**4540017705**	**1**	**F**
4	Hex. screw	933	8.8	M10x30		galvd.		**01013100303**	**1**	**T**
4	Conical spring washer	6796	FSt	10		A4A		**1340010010**	**1**	**T**
2	Hex. nut	934	8	M10		galvd.		**1408100006**	**1**	**T**
1	Support		welded part			7038		**4540017707**	**1**	**F**
2	Hex. screw	933	8.8	M16 x 60		galvd.		**1013160601**	**2**	**T**
2	Hex. nut	934	8	M16		galvd.		**01408160002**	**2**	**T**
2	Shear connector cartridge M16 UPAT-UKA-3							**01999300160**	**2**	**T**
2	UPAT anchor rod with washer and nut M16/190							**01999316190**	**2**	**T**
1	Shaft					7038		**4540017712**	**1**	**F**
2	Hex. socket head cap screw	912	8.8	M8 x 16		galvd.		**01001080170**	**2**	**T**
2	Conical spring washer	6796	FSt	8		A4A		**01340008010**	**2**	**T**
1	Roller							**4540009659**	**1**	**F**
2	Adjusting ring	705		A16		7038		**1211016001**	**2**	**T**
1	Cover plate (crosswise)							**4540009663**	**1**	**T**
1	Cover plate (crosswise)							**4540009664**	**1**	**T**
20	Fillister head screw	7985	4.8	M6 x 12		galvd.		**1048060130**	**20**	**T**
1	Lance		welded part			7038		**4540017716**	**1**	**F**
4	Washer	125	St	B 10,5		galvd.		**1302105115**	**4**	**T**
1	Hex. socket head cap screw	912	8.8	M10x50		galvd.		**1001100510**	**1**	**T**
1	Conical spring washer	6796	FSt	10		A4A		**1340010010**	**1**	**T**
1	Hex. nut	934	8	M10		galvd.		**1408100010**	**1**	**T**
1	Side plate, right							**4540017723**	**1**	**T**
1	Side plate, left							**4540017724**	**1**	**T**
2	Hex. socket head cap screw	912	8.8	M5x35		galvd.		**1001050360**	**2**	**T**
2	Self-locking nut	985		M5		galvd.		**1495050016**	**2**	**T**
1	Cylinder driver		welded part			7038		**4540017726**	**1**	**F**

Stck	Benennung	DIN	Werkstoff	Abmessung	Länge	Obfl	Pos.	EDV-Nr.	Menge	T
	Designation		Material	Size	Length	Surf.		Code-no.	Quantity	EK
				mm	mm					F
8	Hex. socket head cap screw	912	8.8	M5x20		galvd.		1001050215	8	T
8	Conical spring washer	6796	FSt	5		A4A		1340005010	8	T
2	Channel flap, right							4540009675	2	T
2	Channel flap, left							4540009677	2	T
8	Spring screw							4011833300	8	T
8	Hex. nut (self-locking)	985	8	M5		galvd.		1495050016	8	T
8	Conical spring			0,9				3080400601	8	T
1	Centering bolt					br		4540005221	1	F
1	Linear drive	Festo							1	EK
	532449 DGC-40-1600-GF-PPV-A									
1	Foot mounting	Festo		533670 HPC-40					1	EK
2	Proximity switch	Festo		150857 SME-8-S-LED-24				08336000009	2	T
2	Socket cable	Festo		159421 SIM-M8-3GD-5-PU				9940159421	2	T
4	Hex. socket head cap screw	912	8.8	M6x20		galvd.		1001060211	4	T
8	Conical spring washer	6796	FSt	6		A4A		01340006010	8	T
4	Hex. nut	934	8	M6		galvd.		01408060012	4	T
2	One-way flow control valve	Festo		6509 GRA-1/4-B				09526000022	2	T
1	Mounting bracket					7038		4540017984	1	F
	for Siemens 3SE5 162									
2	Hex. socket head cap screw	912	8.8	M6x16		galvd.		1001060174	2	T
2	Conical spring washer	6796	FSt	6		A4A		01340006010	2	T

Stck	Benennung	DIN	Werkstoff	Abmessung	Länge	Obfl	Pos.	EDV-Nr.	Menge	T
	Designation		Material	Size	Length	Surf.		Code-no.	Quantity	EK
				mm	mm					F
	Subassembly: Strap guide channel							**4547001165**		
1	Channel frame		welded part			7038		**4540017727**	**1**	**F**
4	Hex. screw	933	8.8	M16 x 60		galvd.		**1013160601**	**4**	**T**
4	Hex. nut	934	8	M16		galvd.		**01408160002**	**4**	**T**
4	Shear connector cartridge M16 UPAT-UKA-3							**01999300160**	**4**	**T**
4	UPAT - anchor rod with washer and nut M16/190							**01999316190**	**4**	**T**
1	Channel support		welded part			7038		**4540017731**	**1**	**F**
4	Hex. socket head cap screw	912	8.8	M10 x 25		galvd.		**01001080210**	**4**	**T**
4	Conical spring washer	6796	FSt	10		A4A		**01340010010**	**4**	**T**
2	Hex. screw	933	8.8	M8x18		galvd.		**01013080190**	**2**	**T**
2	Conical spring washer	6796	FSt	8		A4A		**01340008010**	**2**	**T**
1	Channel support					7038		**4540017733**	**1**	**F**
4	Hex. socket head cap screw	912	8.8	M6x20		galvd.		**01001060211**	**4**	**T**
4	Conical spring washer	6796	FSt	6		A4A		**01340006010**	**4**	**T**
1	Strap infeed		welded part			7038		**4540002164**	**1**	**F**
2	Hex. screw	933	8.8	M8x18		galvd.		**01013080190**	**2**	**T**
2	Conical spring washer	6796	FSt	8		A4A		**01340008010**	**2**	**T**
1	Channel back					7038		**4540017734**	**1**	**F**
3	Hex. screw	933	8.8	M8x18		galvd.		**01013080190**	**3**	**T**
3	Conical spring washer	6796	FSt	8		A4A		**01340008010**	**3**	**T**
1	Channel back					7038		**4540017735**	**1**	**F**
3	Hex. screw	933	8.8	M8x18		galvd.		**01013080190**	**3**	**T**
3	Conical spring washer	6796	FSt	8		A4A		**01340008010**	**3**	**T**
1	Channel back					7038		**4540017737**	**1**	**F**
2	Hex. screw	933	8.8	M8x18		galvd.		**01013080190**	**2**	**T**
2	Conical spring washer	6796	FSt	8		A4A		**01340008010**	**2**	**T**
1	Channel back					7038		**4540017746**	**1**	**F**
2	Hex. screw	933	8.8	M8x20		galvd.		**01013080210**	**2**	**T**

Stck	Benennung	DIN	Werkstoff	Abmessung	Länge	Obfl	Pos.	EDV-Nr.	Menge	T
	Designation		Material	Size	Length	Surf.		Code-no.	Quantity	EK
				mm	mm					F
2	Conical spring washer	6796	FSt	8		A4A		**01340008010**	**2**	**T**
2	Channel corner					7038		**4540003176**	**2**	**T**
1	Channel corner					7038		**4540017754**	**1**	**T**
9	Hex. screw	933	8.8	M8x18		galvd.		**01013080190**	**9**	**T**
9	Conical spring washer	6796	FSt	8		A4A		**01340008010**	**9**	**T**
3	Curved plate		V2A					**4502004280**	**3**	**T**
3	Curved plate		V2A					**4502004290**	**3**	**T**
6	Hex. socket head cap screw	912	8.8	M5x35		galvd.		**1001050360**	**6**	**T**
6	Self-locking nut	985	8	M5		galvd.		**1495050016**	**6**	**T**
4	Channel flap, right		V2A	25 / 370				**4540017747**	**4**	**T**
4	Channel flap, left		V2A	25 / 370				**4540017748**	**4**	**T**
3	Channel flap, right		V2A	25 / 315				**4540017749**	**3**	**T**
3	Channel flap, left		V2A	25 / 315				**4540017750**	**3**	**T**
1	Channel flap, right		V2A	25 / 235				**4540003177**	**1**	**T**
1	Channel flap, left		V2A	25 / 235				**4540003178**	**1**	**T**
1	Channel flap, right		V2A	25 / 172				**4540014549**	**1**	**T**
1	Channel flap, left		V2A	25 / 172				**4540014548**	**1**	**T**
36	Spring screw							**4011833300**	**36**	**T**
	(made out of hex.socket head	912	8.8	M5x40	22	galvd.				
	cap screw)									
36	Hex. nut (self-locking)	985	8	M5		galvd.		**1495050016**	**36**	**T**
36	Conical spring			0,9				**3080400601**	**36**	**T**

Stck	Benennung	DIN	Werkstoff	Abmessung	Länge	Obfl	Pos.	**EDV-Nr.**	Menge	T
	Designation		Material	Size	Length	Surf.		**Code-no.**	Quantity	EK
				mm	mm					F
.										

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Art.-Nr.: 76902174014

ERSATZ- UND VERSCHLEIßTEILLISTE
Spare part list VS11-S

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Kunde: Möllers

Lfd-Nr. / Serial-No.	Zeichnungs.-Nr. / Drawing No.	Benennung / Abmessung / Type / Designation / Dimension / Type	Hersteller / Manufacturer	Kategorie*) / Code*)	Gesamtanzahl / Total Quant.	Lagervorschl. Rec. Stock 12 Mon.	Lagervorschl. Rec. Stock 24 Mon.	Time of delivery / weeks	Preis / Price €/Stück/Pieces
		Umreifungskopf VS11-L	Siehe auch Ersatzteilliste VS11-L [E02-11 DE 06/13]						
		Strapping head VS11-L	See also spare part list VS11-L [E02-11 DE 06/13]						
1	010002 - 11	Passfeder/feather key DIN 6885 - 8x7x25		V	1	2	4	3	
2	010002 - 12	Stützscheibe/supporting disc DIN988 - S28x40x2		V	1	2	4	3	
3	010002 - 13	Axialscheibe/axial disc AS 3047		V	2	2	4	3	
4	010002 - 24	Spannrad/tensioning wheel	TITAN	V	1	2	4	3	
5	010002 - 32	Passfeder/feather key DIN 6885 - A6x6x25		V	1	2	4	3	
6	010002 - 33	Stützscheibe / supporting disc DIN 988 - 20x28x2		V	2	4	6	3	
7	010002 - 34	Sicherungsscheibe/lock washer DIN 6799 - 15		V	1	2	4	3	
8	010002 - 42	Transportrolle/conveying roller	TITAN	V	1	2	4	3	
9	010002 - 54	Stützrolle/supporting roller	TITAN	V	1	2	4	3	
10	010002 - 58	Axialscheibe/axial disc AS 2542		V	1	2	4	3	
11	010002 - 59	Sicherungsscheibe/lock washer DIN 6799 - 19		V	1	2	4	3	
12	010002 - 62	Laufrolle/roller		V	1	2	4	3	
13	010002 - 63	Stützscheibe/supporting disc DIN 988 - S17x24		V	1	2	4	3	
14	010002 - 64	Sicherungsscheibe/lock washer DIN 6799 - 15		V	1	2	4	3	
15	010002 - 111	Seitenführung, rechts hinten/side guidance, right, back	TITAN	E	1			3	
16	010002 - 119	Seitenführung, links hinten/side guidance, left, back	TITAN	E	1			3	
17	010002 - 122	Seitenführung, vorn/side guidance front	TITAN	E	1			3	
18	010002 - 135	Laufrolle FG 619 EE/roller		E	2			3	
19	010002 - 174	Näherungsschalter/proximity switch		E	2			3	
20	010002 - 177	Seitenführung/side guidance		E	1			3	

Kategorie*)
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Titan Umreifungstechnik
D-58332 Schwelm

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Art.-Nr.: 76902174014

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21	010002 - 180	Kanalklappe, links/channel flap, left		V	1	2	4	3	
22	010002 - 188	Kanalklappe, rechts hinten/channel flap, back right	TITAN	V	1	2	4	3	
23	010002 - 181	Federschraube/Spring bolt	TITAN	V	2	4	8	4	
24	010002 - 184	Kanalklappe, rechts vorn/channel flap, right front	TITAN	V	1	2	4	3	
25	010002 - 185	Federschraube/Spring bolt	TITAN	V	2	4	8	4	
26	010002 - 186	Kegelfeder/conical wire spring	TITAN	V	2	4	8	4	
27	010002 - 187	Sechskantmutter M5 DIN985/Hex. nut		V	2	4	8	3	
28	010002 - 189	Federschraube/Spring bolt	TITAN	E	2			3	
29	010002 - 344	Zylinderschraube/Hex. socket head cap screw ISO 4762-M8x	TITAN	V	4	4	8	4	
30	010002 - 345	Sicherungsscheibe/Locking washer		V	4	4	8	4	
31	010002 - 346	Welle/Shaft	TITAN	E	1			3	
32	010002 - 383	Kanalklappe, rechts/channel flap, right	TITAN	V	1	2	4	3	
33	010002 - 384	Kanalklappe, links/channel flap, left	TITAN	V	1	2	4	3	
34	010002 - 385	Federschraube/Spring bolt	TITAN	V	4	4	8	3	
35	010002 - 386	Kegelfeder/conical wire spring	TITAN	V	4	4	8	3	
36	010002 - 420	DIN913 - M5x8	TITAN	E	1			3	
37	010002 - 421	Zylinderschraube/Hex. socket head cap screw ISO 4762-M6x	TITAN	V	2	4	8	4	
38	010002 - 422	Sicherungsscheibe/Locking washer		V	2	4	8	3	
39	010002 - 435	Untermesser, rechts/lower cutter, right	TITAN	E	1			3	
40	010002 - 436	Untermesser, links/lower cutter, left	TITAN	E	1			3	
41	010002 - 438	Obermesser, links/upper cutter, left	TITAN	E	1			3	
42	010002 - 440	Obermesser, rechts/upper cutter, right	TITAN	E	1			3	

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43	010002 - 443	Abschneidmesser/Cutter	TITAN	V	1	2	4	3	
44	010002 - 445	Klemmesser, links/clamping cutter, left	TITAN	V	1	2	4	3	
45	010002 - 446	Klemmesser, rechts/clamping cutter, right	TITAN	V	1	2	4	3	
46	010002 - 454	Zylinderschraube/Hex. socket head cap screw ISO 4762-M6x	TITAN	V	2	4	8	4	
47	010002 - 458	Gegenmesser/countercutter	TITAN	V	1	2	4	3	
48	010002 - 531	Messerpaket 16mm komplett/cutter package 16mm complete	TITAN	V	1	2	4	3	
49	010002 - 1042	Klemmführung 13mm/clamp guidance 16mm	TITAN	V	1	2	4	3	
50	010002 - 1092	Klemmesser, links 16mm/clamping cutter, left	TITAN	V	1	2	4	3	
51	010002 - 1102	Klemmesser, rechts 16mm/clamping cutter, right	TITAN	V	1	2	4	3	
	4547000574	**Bandklemme, pneumatisch/Pneum. strap clamp**							
	4545000297	Pneumatic plan							
52	09940156015	Pneumatic cylinder ADVU-40-10-P-A-S2	FESTO	E	1			4	
53	9942000120	Magnetventil/Solenoid valve CPE14-M1BH-3GL-1/8	FESTO	E	1			4	
54		Steckdose/Socket cable KMYZ-9-24-5-LED-PUR-B	FESTO	E	1			4	
55	9942400025	Schalldämpfer/Silencer UC-1/8	FESTO	E	1			4	

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		Bandzuführung/Strap feed							
56	1594104830	Spannrolle/Tension roller RSR.B.16.159.LO	TITAN	V	1	1	2	3	
57	1501630103	Rillenkugellager/Grooved ball bearing 6301-2Z	SKF	E	2			3	
	4547001190	**Maschinenständer/Machine frame**							
58		Anschraubplatte/Mounting plate AP0 no.212.003.000	Winkel	E	4			3	
59		Pneumatic cylinder DNC-50-300-PPV-A	FESTO	E	1			4	
60		Näherungsschalter/Proximity switch SMT-8-PS-S-LED-24-B	FESTO	E	2			4	
61		Steckdose mit Kabel/Socket with cable SIM-M8-3GD-5-PU	FESTO	E	2			4	
62		Drossel-Rückschlagventil/One-way flow control valve GRLA-1/4-QS-8-RS-B	FESTO	E	2			4	
63		Einschaltventil/on-off valve HEE-1/2-MIDI-24	FESTO	E	1			4	

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	4547001190	**Lanze/Lance**							
64		Linearantrieb/Pneum. linear drive DGC-40-1600-GF-PPV-A	FESTO	E	1			4	
65	**8336000009**	Näherungsschalter/Proximity switch SME-8-S-LED-24	FESTO	E	4			4	
66	**9940159421**	Steckdose SIM-M8-3GD-5-PU	FESTO	E	4			4	
67		Drossel-Rückschlagventil/One-way flow control valve	FESTO	E	4			4	
		GRA-1/4-B							
	4545000388	**Pneumatikzubehör/Pneumatic accessories**							
92		Magnetventil/Solenoid valve CPE18-M1H-5/3B-1/4	FESTO	E	1			4	
93		Magnetventil/Solenoid valve CPE18-M1H-5/3G-1/4	FESTO	E	1			4	
94		Schalldämpfer/Silencer U-1/4	FESTO	E	4			4	
95		Steckdosenkabel/Socket cable KMEB-1-24-5-LED	FESTO	E	4			4	
96		Wartungsgeräte-Kombination/Air service unit	FESTO	E	1			4	
		MSB6-1/2: C4: J2: F1: D4: F3-WP							

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	4547001165	**Kanalsystem/Strap guide channel**							
70	4540017747	Kanalklappe/Channel flap	TITAN	V	4	4	8	3	
71	4540017748	Kanalklappe/Channel flap	TITAN	V	4	4	8	3	
72	4540017749	Kanalklappe/Channel flap	TITAN	V	3	3	6	3	
73	4540017750	Kanalklappe/Channel flap	TITAN	V	3	3	6	3	
74	4540003177	Kanalklappe/Channel flap	TITAN	V	1	1	2	3	
75	4540003178	Kanalklappe/Channel flap	TITAN	V	1	1	2	3	
76	4540014549	Kanalklappe/Channel flap	TITAN	V	1	1	2	3	
77	4540014548	Kanalklappe/Channel flap	TITAN	V	1	1	2	3	
78	4011833300	Federschraube/Spring screw	TITAN	V	36	36	72	3	
79	3080400601	Kegelfeder/Conical spring	TITAN	V	36	36	72	3	
80		Sechskantmutter, selbsts./Hex. nut (self-locking) M8,DIN985		V	36	36	72	3	

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		Elektrik							
81	08260000005	Koppelrelais / Coupler relay	Finder	E	9	2	4	4	
82	08211000543	Induktiver Näherungsschalter / Inductive proximity switch	ifm electroni	E	2	1	1	4	
83	08336000168	Induktiver Näherungsschalter / Inductive proximity switch	ifm electroni	E	3	1	2	4	
84	08300003030	Sicherheitsrelaisbaustein / Safety relay module	Schmersal K	E	2	1	1	4	
85	08300003031	Erweiterungsbaustein 24V DC / Extension module	Schmersal K	E	2	1	1	4	
86	08337000002	Reflektor PL 30A, 30 x 50 / Reflector	SICK	E	6	2	3	4	
87	08337000033	Reflexions-Lichtschranke 0.03 / Reflection light barrier	SICK	E	6	2	3	4	
88	08140000300	Redundanzmodul / Redundancy module	Murrelektror	E	1	1	1	4	
89	08770000125	Sicherungsmodul-4-Kanal / Safety module, 4-channel	Murrelektror	E	1	1	1	4	
90	08871066151	SCHUETZ, 3KW, 1OE / Contactor	Siemens	E	4	1	2	4	
91	08871066160	Entstoerdiode, DC12-250V / Interference suppression diode	Siemens	E	4	1	1	4	
92	08872000049	Leistungsschalter Bgr. S00 / Circuit breaker	Siemens	E	1	1	1	4	
93	08872000052	Leistungsschalter BGR. S00/ Circuit breaker	Siemens	E	2	1	1	4	
94	08872000039	Leistungsschalter Bgr. S00 / Circuit breaker	Siemens	E	1	1	1	4	
95	08872000033	Leistungsschalter Bgr. S00 / Circuit breaker	Siemens	E	1	1	1	4	
96	08872000051	Leistungsschalter, Bgr. S0 / Circuit breaker	Siemens	E	1	1	1	4	
97	08332300740	Schaltelem. m. 1SCHLTGLD,1S,1P / Switching element	Siemens	E	9	2	4	4	
98	08332300741	Schaltelement m. 1SCHLTGLD,1OE / Switching element	Siemens	E	2	1	1	4	
99	08332300773	Schaltelement Safety / Switching element "safety"	Siemens	E	3	1	2	4	
100	08332300771	Schwenkhebel f. Positionssch./Slewing lever f. position switch	Siemens	E	1	1	1	4	

Kategorie*)
V=Verschleißteil
E=Ersatzteil

Proj.-Nr.: T13079
AB-Nr.: 14134839
Art.-Nr.: 76902174014

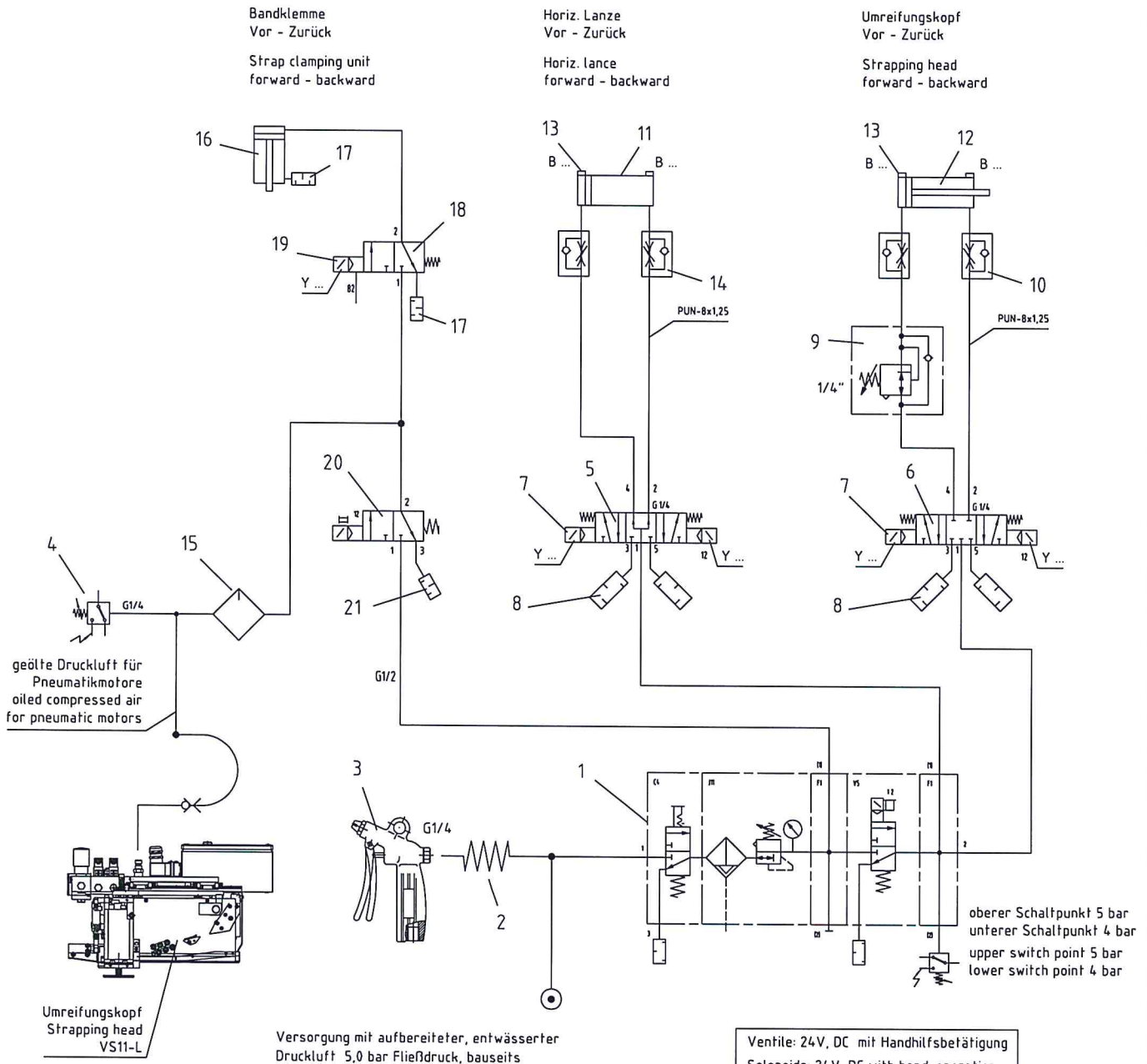
ERSATZ- UND VERSCHLEIßTEILLISTE
Spare part list VS11-S

454X001964_1_00000.xls 26.11.2013
Kunde: Möllers

Lfd-Nr. / Serial-No.	Zeichnungs.-Nr. / Drawing No.	Benennung / Abmessung / Type / Designation / Dimension / Type	Hersteller / Manufacturer	Kategorie*) / Code*)	Gesamtanzahl / Total Quant.	Lagervorschl. Rec. Stock 12 Mon.	Lagervorschl. Rec. Stock 24 Mon.	Time of delivery / weeks	Preis / Price €/Stück/Pieces
101	08310000148	Antriebskopf fr Positionssch./Actuator f. position switch	Siemens	E	1	1	1	4	
102	08310000149	Basisschalter / Basic switch	Siemens	E	1	1	1	4	
103	08700000097	Transformator / Transformer	Siemens	E	1	1	1	4	
104	08211000174	FI-Schutzschalter Typ A / Ground fault circuit interruptor	Siemens	E	1	1	1	4	
105	08211000148	Hilfsstromschalter / Control switch	Siemens	E	1	1	1	4	
106	08805001012	Hilfsstromschalter AS / Control switch	Siemens	E	1	1	1	4	
107	08211000097	Leitungsschutzschalter B10 / Circuit breaker	Siemens	E	1	1	1	4	
108	08140000066	OP177B DP Blue Mode STN-Display	Siemens	E	1	1	1	4	
109	08140000233	Gleichstromversorgung / DC supply	Siemens	E	2	1	1	4	
110	08140000136	Simatic S7-300 CPU315-2DP	Siemens	E	1	1	1	4	
111	08140000076	Simatic S7-300, Digitaleingabe / Digital input	Siemens	E	2	1	1	4	
112	08140000077	Simatic S7-300, Digitalausgabe / Digital output	Siemens	E	1	1	1	4	
113	08140000084	Simatic S7-300, Digitalbaugr. / Digital module	Siemens	E	1	1	1	4	
114	08140000078	Simatic S7-300, Digitalbaugrup / Digital module	Siemens	E	1	1	1	4	
115	08140000220	SIMATIC S7-300, Zählerbaugr. / Counter module	Siemens	E	1	1	1	4	
116	08140000079	Kommunikationsprozessor / Communication processor	Siemens	E	2	1	1	4	
117	08699009061	SINAMICS Bremswiderstand / Brake resistor	Siemens	E	1	1	1	4	
118	08699009059	SINAMICS Power Module 240	Siemens	E	1	1	1	4	
119	08699009077	SINAMICS Control Unit	Siemens	E	1	1	1	4	
120	08699009060	SINAMICS SAFE BRAKE RELAY F. P	Siemens	E	1	1	1	4	
121	08699009078	SINAMICS G120 BOP 2	Siemens	E	1	1	1	4	
122	08140000237	Gleichstromnetzteil Smart 5A 120-230V/24V / DC-supply unit	Siemens	E	2	1	1	4	

Kategorie*)
V=Verschleißteil
E=Ersatzteil

Titan Umreifungstechnik
D-58332 Schwelm



Versorgung mit aufbereiteter, entwässerter Druckluft 5,0 bar Fließdruck, bauseits Anschluß G1/2

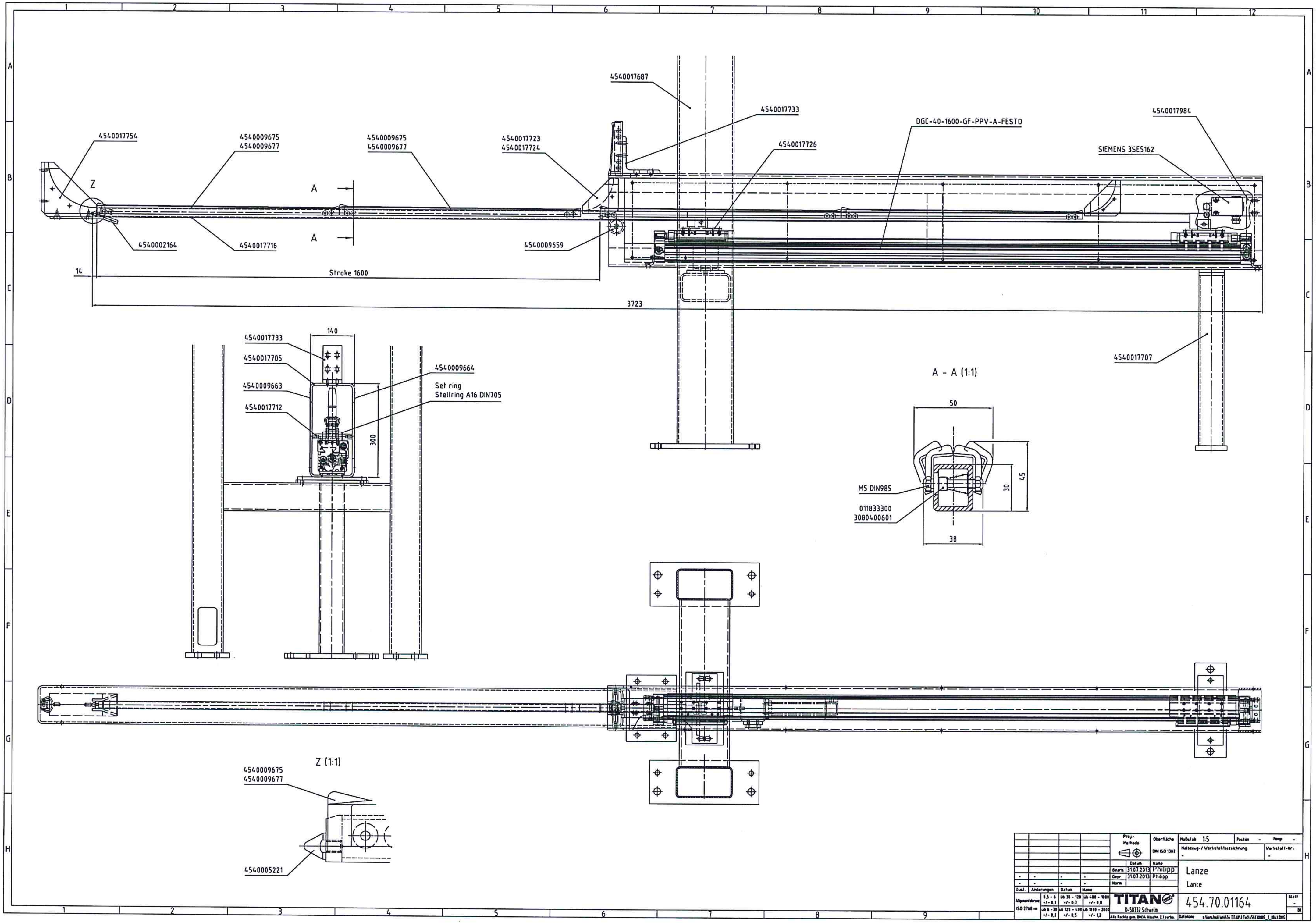
Supply of pressed and dehydrated air, 5,0 bar flow pressure, by operating company Connection G1/2

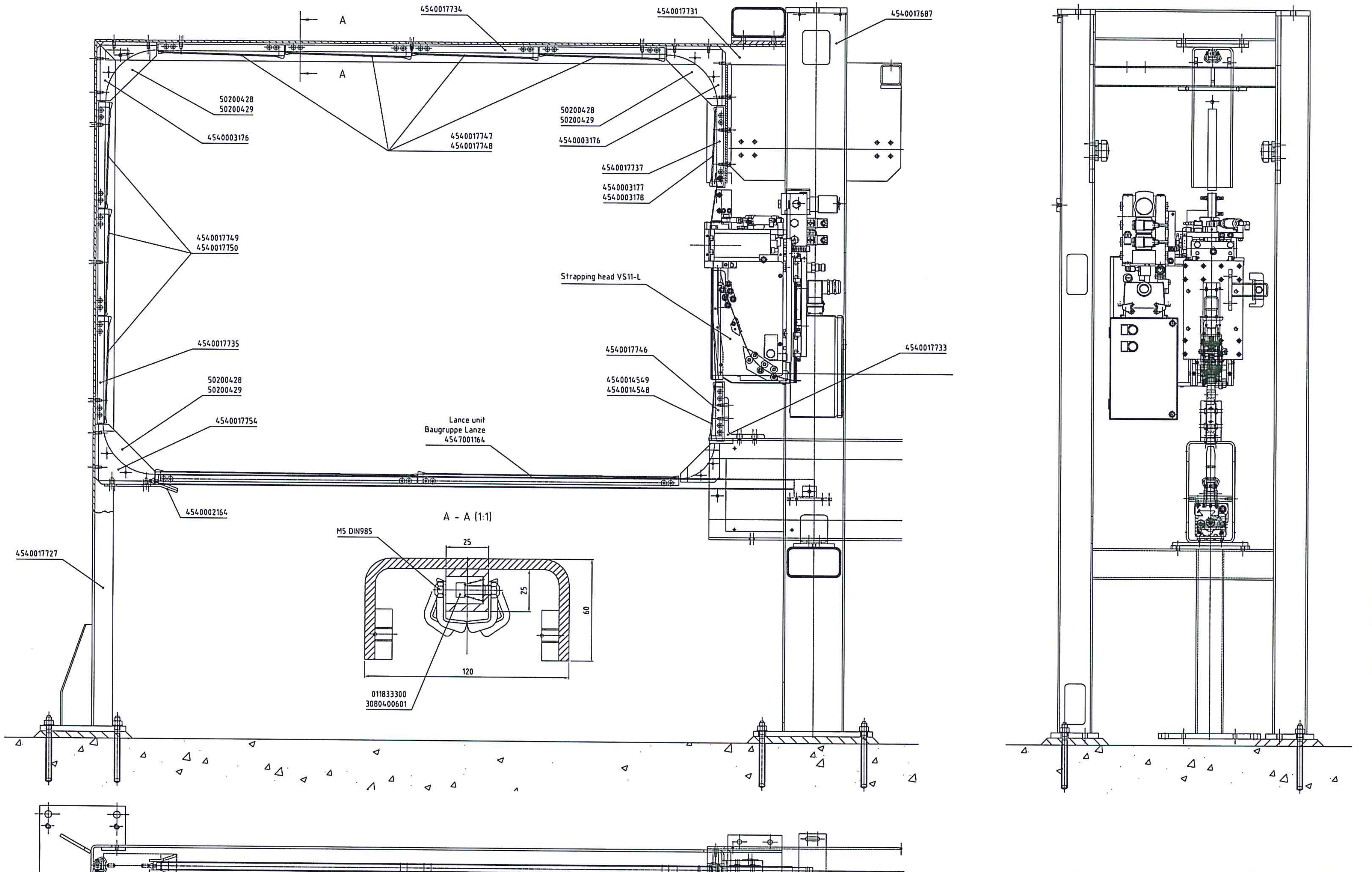
Ventile: 24V, DC mit Handhilfsbetätigung
Solenoids: 24V, DC with hand-operation

Pos	Qty	Benennung/Designation	Manufact.
19	1	Steckdosenkabel 193689 KMYZ-9-4-5-LED-PUR-B Cable with socket 193689 KMYZ-9-4-5-LED-PUR-B	Festo
18	1	3/2-Magnetventil 193689 CPE14-M1BH-3GL-1/8 3/2-Way solenoid valve 193689 CPE14-M1BH-3GL-1/8	Festo
17	2	Schalldämpfer 161419 UC-1/8 Silencer 161419 UC-1/8	Festo
16	1	Kompaktzylinder 156015 ADVU-40-10-P-A-S2 Compact cylinder 156015 ADVU-40-10-P-A-S2	Festo
15	1	Druckluftöler 192576 LOE-D-MIDI Lubricator 192576 LOE-D-MIDI	Festo
	1	Befestigungswinkel 159593 HFOE-D-MIDI/MAXI Mounting bracket 159593 HFOE-D-MIDI/MAXI	Festo
14	2	Drossel-Rückschlagventil GRA-1/4-B One-way flow control valve GRA-1/4-B	Festo
13	4	Näherungsschalter 175484 SMT-8-PS-S-LED-24-B Proximity switch 175484 SMT-8-PS-S-LED-24-B	Festo
	4	Steckdose mit Kabel 5m 159421 SIM-M8-3GD-5-PU Plug socket with cable 5m 159421 SIM-M8-3GD-5-PU	Festo
12	1	Pneumatikzylinder DNC-50-300-PPV-A Pneumatic cylinder DNC-50-300-PPV-A	Festo
	1	Gabelkopf 6146 SG-M16x1,5 Rod clevis 6146 SG-M16x1,5	Festo
	1	Schwenkzapfen-Bausatz 163527 ZNCM-50 Trunnion mounting kit 163527 ZNCM-50	Festo
11	1	Linearantrieb 532449 DGC-40-1600-PPV-A Rodless linear drive 532449 DGC-40-1600-PPV-A	Festo
	1	Fußbefestigung 533670 HPC-40 Foot mounting 533670 HPC-40	Festo
10	4	Drossel-Rückschlagventil 162968 GRLA-1/4-QS-8-RS-B One-way flow control valve 162968 GRLA-1/4-QS-8-RS-B	Festo
9	1	Druckregelventil 153494 LRMA-1/4-QS-8 Pressure regulating valve 153494 LRMA-1/4-QS-8	Festo
8	4	Schalldämpfer 2316 U-1/4 Silencer 2316 U-1/4	Festo
7	4	Steckdosenkabel 151689 KMEB-1-24-5-LED Cable with socket 151689 KMEB-1-24-5-LED	Festo
6	1	Magnetventil 170247 CPE18-M1H-5/3G-1/4 Solenoid valve170247 CPE18-M1H-5/3G-1/4	Festo
5	2	Magnetventil 170251 CPE18-M1H-5/3B-1/4 Solenoid valve 170251 CPE18-M1H-5/3B-1/4	Festo
4	1	Druckschalter 161760 PEV-1/4-SC-OD Pressure sensitive switch 161760 PEV-1/4-SC-OD	Festo
3	1	Luftblaspistole 35528 LBP-1/4 Safety air gun 35528 LBP-1/4	Festo
	1	Blasdüse 184319 LPZ-RB-150 Blas nozzle 184319 LPZ-RB-150	Festo
2	1	Spiralschlauch 19796 PPS-6-7.5-1/4-BL Spiral plastic tubing 19796 PPS-6-7.5-1/4-BL	Festo
1	1	Wartungseinheit 531030 MSB6-1/2:C4:J2:F1:D4:F3-WP Service unit 531030 MSB6-1/2:C4:J2:F1:D4:F3-WP	Festo

21	1	Schalldämpfer 2310 U-1/2 Silencer 2310 U-1/2	Festo
20	1	Einschaltventil 172944 HEE-1/2-MIDI-24 On/off valve 172944 HEE-1/2-MIDI-24	Festo

-	-	-	-	Proj.-Methode:	Oberfläche DIN ISO 1302	Maßstab 1:1	Position - Menge -
						Halbzeug-/ Werkstoffbezeichnung:	Werkstoff-Nr.:
					Datum	Name	
				Bearb	25.07.2013	Philipp	Pneumatic plan
-	-	-	-	Gepr	25.07.2013	Philipp	
a	HEE-1/2-MIDI-24	31.10.2013	Philipp	Norm			Strapping machine VS11-S
Zust.	Änderungen	Datum	Name				
Allgemeintoleranz ISO 2768-m	0,5 - 6 +/- 0,1	üb 30 - 120 +/- 0,3	üb 400 - 1000 +/- 0,8	TITAN		454.50.00388	Blatt - Bl
	üb 6 - 30 +/- 0,2	üb 120 - 400 +/- 0,5	üb 1000 - 2000 +/- 1,2	D-58332 Schwelm			
				Alle Rechte gem. DIN 34 Abschn. 2.1 vorbe.		Dateiname	s:\konstruktion\454 TITAN\0 Teil\454.00.0378_1_BOM.DWG


4540017687
4540017733
DGC-40-1600-GF-PPV-A-FESTO
4540017984
4540017754
4540009675
4540009677
4540009675
4540009677
4540017723
4540017724
4540017726
SIEMENS 3SE5162
Z
A
A
4540002164
4540017716
4540009659
14
Stroke 1600
3723
140
4540017733
4540017705
4540009663
4540017712
4540009664
Set ring
Stellring A16 DIN705
300
4540017707
A - A (1:1)
50
45
30
38
M5 DIN985
011833300
3080400601
Z (1:1)
4540009675
4540009677
4540005221
Proj.-Methode
Oberfläche
DIN ISO 1302
Maßstab 1:5
Position -
Menge -
Halbzeug-/Werkstoffbezeichnung
Werkstoff-Nr.:
Datum
Name
Bearb. 31.07.2013 Philipp
Gepr. 31.07.2013 Philipp
Norm
Lanze
Lance
Zust.
Änderungen
Datum
Name
Allgemeintoleranz ISO 2768-m
0,5 - 6 +/- 0,1
üb 6 - 30 +/- 0,2
üb 30 - 120 +/- 0,3
üb 120 - 400 +/- 0,5
üb 400 - 1000 +/- 0,8
üb 1000 - 2000 +/- 1,2
TITAN
D-58332 Schwelm
454.70.01164
Blatt
-
Bl



Proj.-Methode	Oberfläche: DIN ISO 1302	Maßstab 1:5	Position -	Menge -
		Halbzeug-/Werkstoffbezeichnung: -		Werkstoff-Nr.: -
	Datum	Name		
Bearb.	31.07.2013	Philipp	Kanalsystem	
Gepr.	31.07.2013	Philipp	Strap guide channel	
Norm				

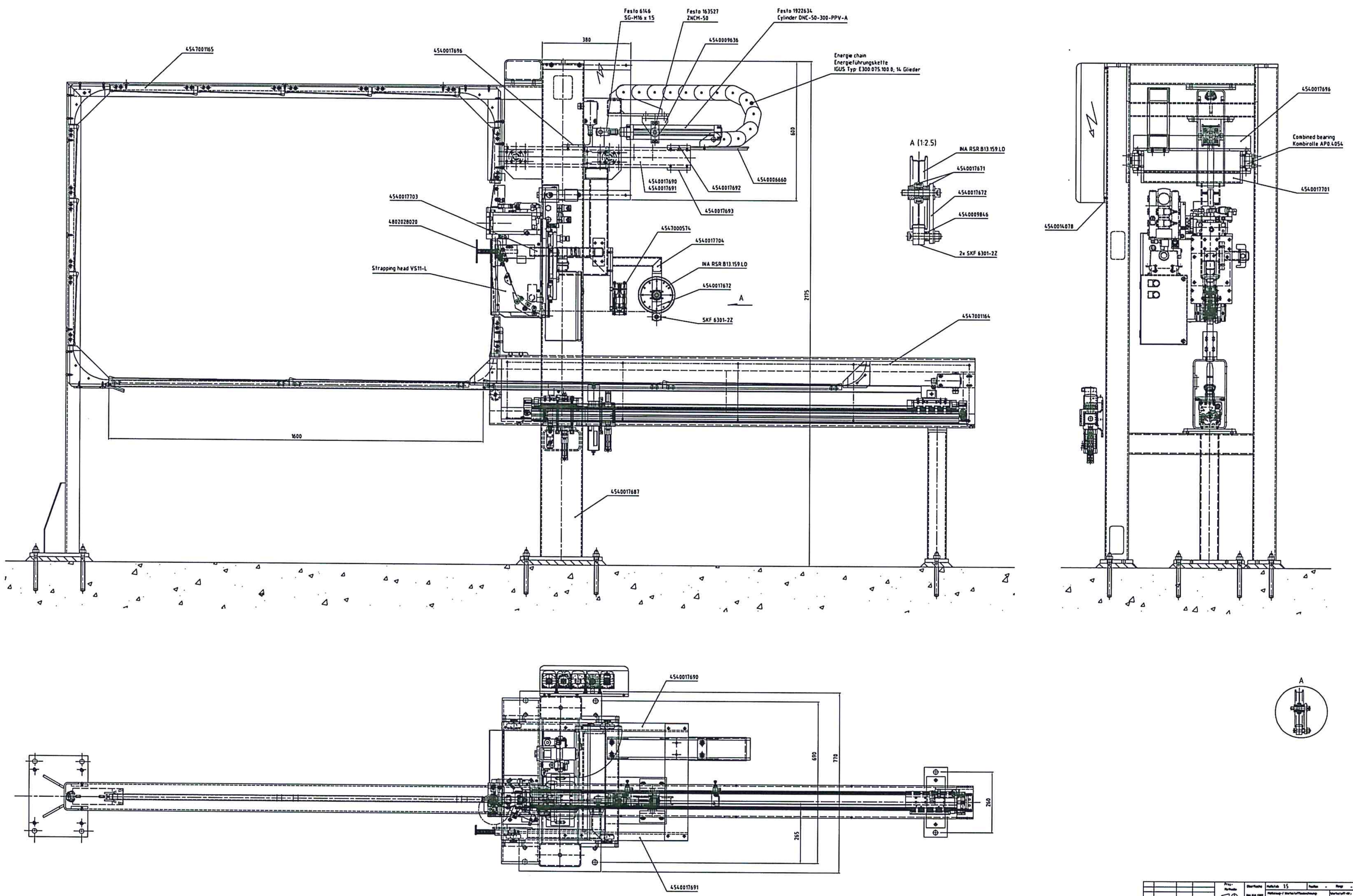
Zust.	Änderungen	Datum	Name
-	-	-	-
-	-	-	-

Allgemeintoleranz ISO 2768-m	0,5 - 6 +/- 0,1	üb 6 - 30 +/- 0,2	üb 30 - 120 +/- 0,3	üb 120 - 400 +/- 0,5	üb 400 - 1000 +/- 0,8	üb 1000 - 2000 +/- 1,2

TITAN
D-58332 Schwelm
Alle Rechte gem. DIN 34 Abschn. 3.1 vorbeh.

454.70.01165

Blatt -



Maßstab 1:5

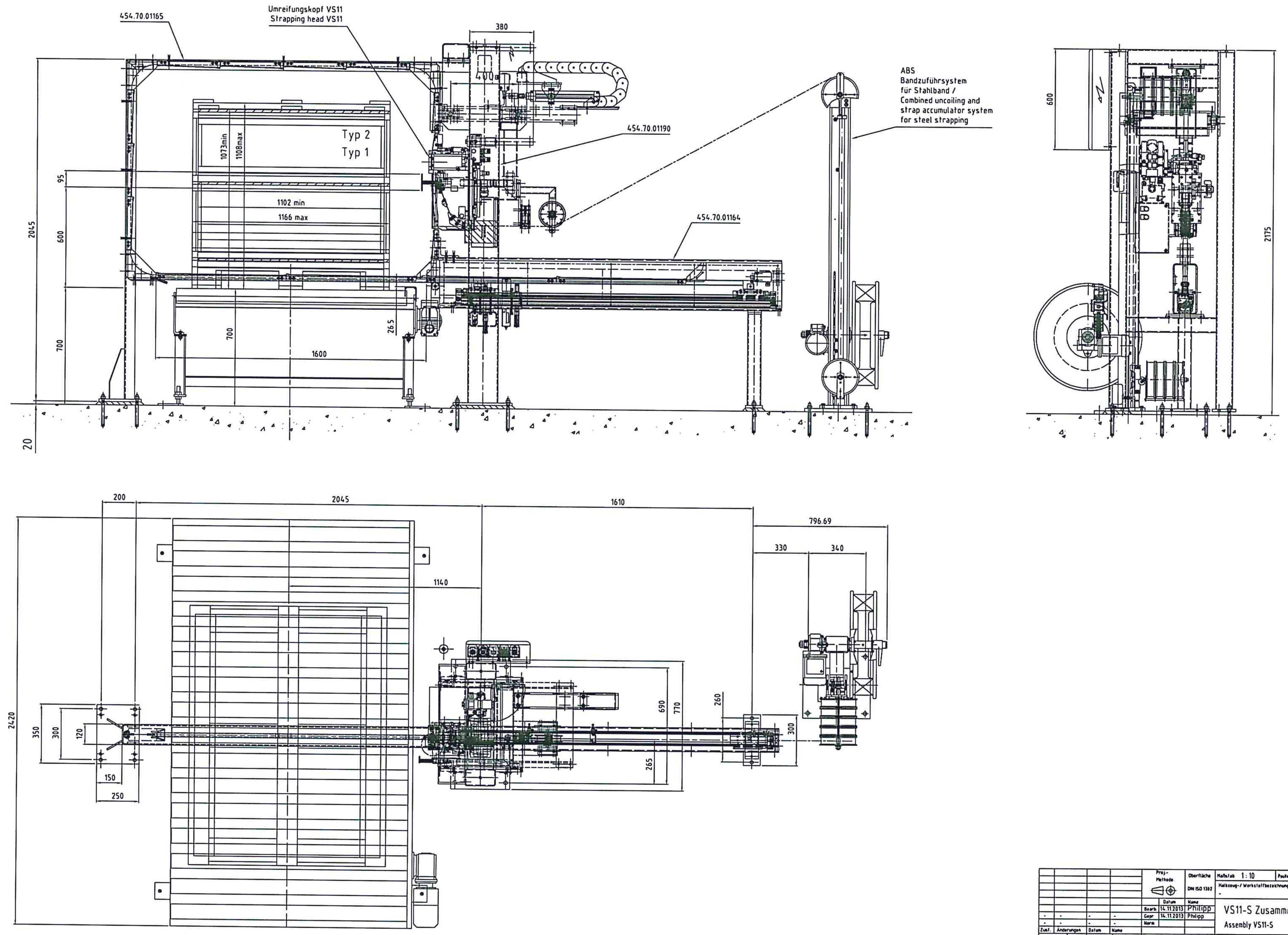
Maschinenständer

Machine frame

Name: Philipp

TITAN

454.70.01190



Proj-Methode	Oberfläche: DIN ISO 1302
Maßstab	1:10
Position	-
Menge	-
Halbzeug-/Werkstoffbezeichnung	-
Werkstoff-Nr.:	-
Bearb.	14.11.2013 Philipp
Gepr.	14.11.2013 Philipp
Norm	

Zust.	Änderungen	Datum	Name
-	-	-	-

Allgemeintoleranz ISO 2768-m	0,5 - 6	üb 30 - 120	üb 400 - 1000
	+/- 0,1	+/- 0,3	+/- 0,8
	üb 6 - 30	üb 120 - 400	üb 1000 - 2000
	+/- 0,2	+/- 0,5	+/- 1,2

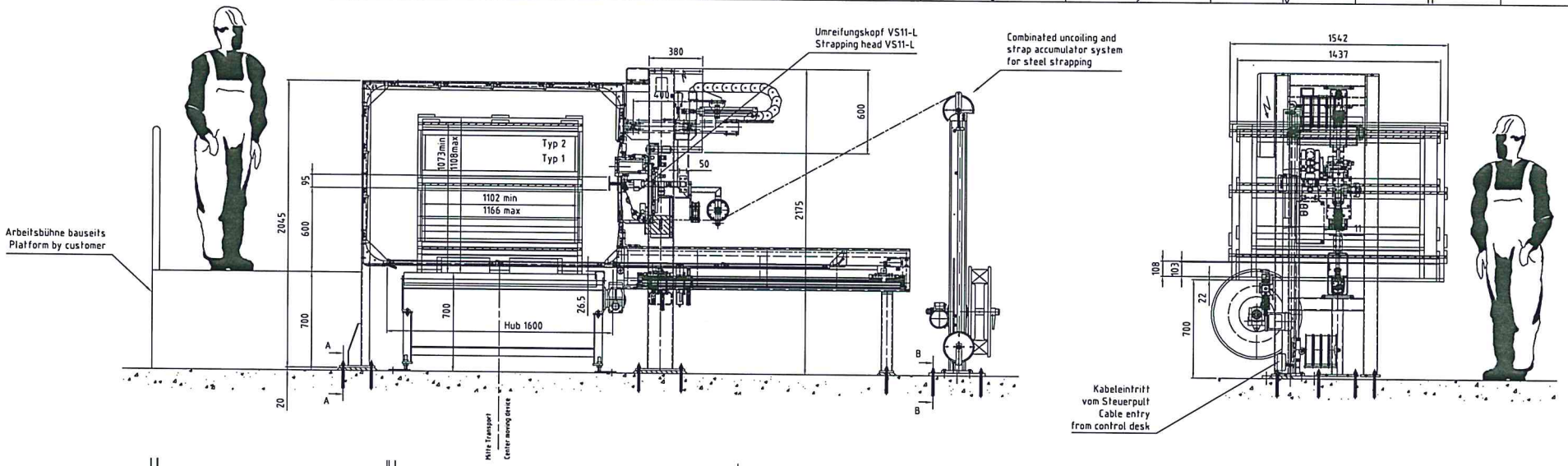
TITAN
D-58332 Schwelm

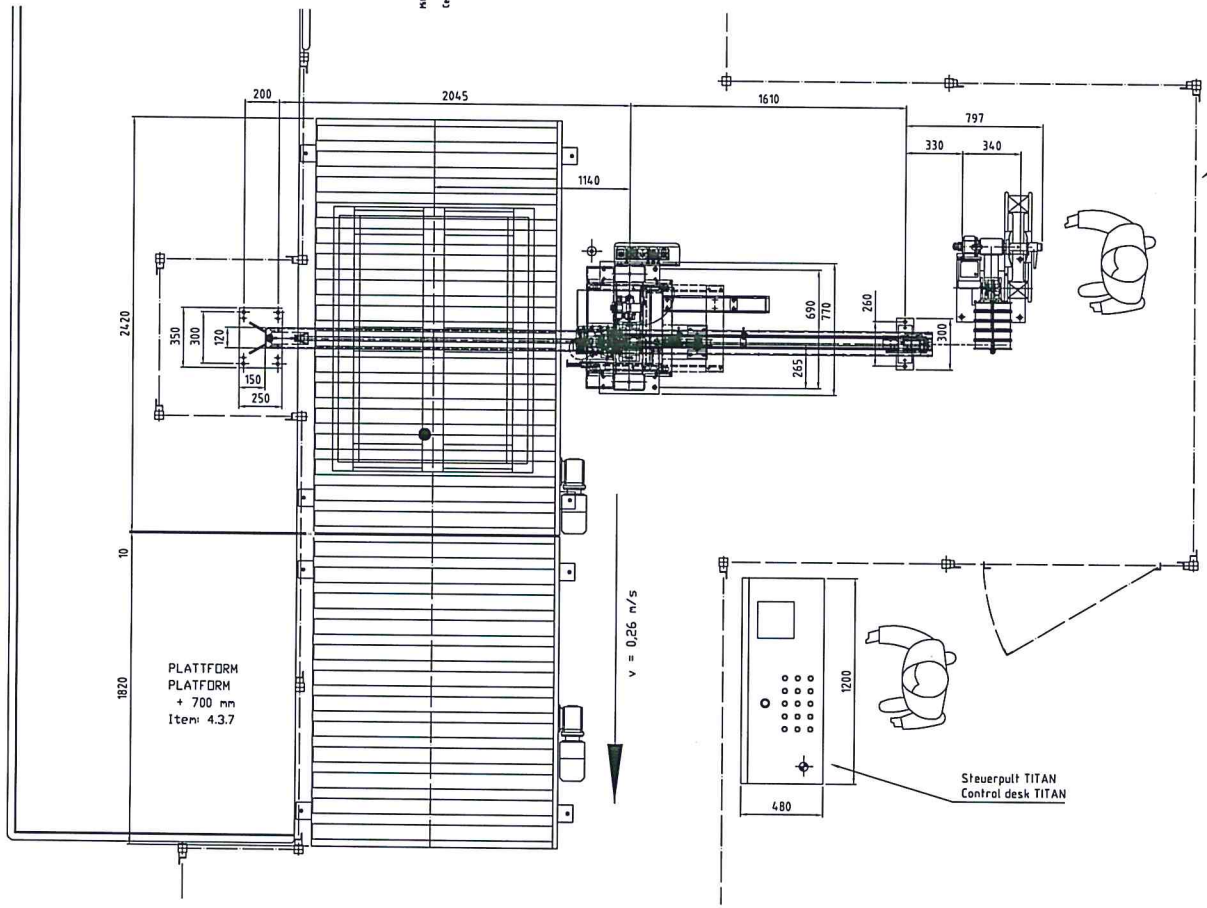
Alle Rechte gem. DIN34 Abschn. 2.1 vorbe.

VS11-S Zusammenstellung
Assembly VS11-S

454.80.00497

Blatt -
Bl





Pneumatik:
Versorgung mit aufbereiteter, entwässerter Druckluft bauseits, Anschluss R1/2"
Betriebsdruck mind. 5 bar Fließdruck
Luftbedarf 0,3 Nm³/min
Luftverbrauch 0,3 Nm³/Umreifung

Pneumatic equipment: supply of conditioned, dehydrated air pressure
Air supply R1/2"
(to be provided for by operator)
Operation pressure min 5 bar flow pressure
Air requirement 0,3 Nm³ /min
Air consuption 0,3 Nm³/strapping

Kabel, Kabelzuführung und elektr. Einspeisung bauseits
Einspeisung 460 V 60 Hz
Steuerspannung 24 V DC
Ventilspannung 24 V DC

Cable, Cable links and main supply to be provided for by the operator
Electrical supply : 460V 60Hz
Control voltage : 24V DC
Valve voltage : 24V DC

A-A

UPAT-UKA 3 Verbundanker
M16, l = 125 mm, l = 190 mm
galv. verzinkt
mit Mutter
mit Scheibe
mit Patrone für 1 x ø
F ab 0 N = 15 kN

UPAT-UKA 3 Cher connector
M16, l = 125 mm, l = 190 mm
zinc galvanic
with nut
with disc
with ampoule for 1x ø
F ab 0 N = 15 kN

B-B

UPAT-UKA 3 Verbundanker
M16, l = 125 mm, l = 190 mm
galv. verzinkt
mit Mutter
mit Scheibe
mit Patrone für 1 x ø
F ab 0 N = 15 kN

UPAT-UKA 3 Cher connector
M16, l = 125 mm, l = 190 mm
zinc galvanic
with nut
with disc
with ampoule for 1x ø
F ab 0 N = 15 kN

					Proj.-Methode	Oberfläche DIN ISO 1302	Maßstab 1:15	Position -	Menge -	
							Maßbezug-/ Werkstoffbezeichnung -		Werkstoff-Nr.: -	
					Datum	Name				
					Bearb. 09.07.2013	Philipp	VS11-S Übersichtsplan			
-	-	-	-		Gepr. 09.07.2013	Philipp	Layout VS11-S			
-	-	-	-		Norm					
Zust.	Änderungen	Datum	Name							
Allgemeintoleranz ISO 2768-m	0,5 - 6 +/- 0,1	üb 6 - 30 +/- 0,2	üb 30 - 120 +/- 0,3	üb 400 - 1000 +/- 0,8	TITAN D-58332 Schwelm		454.90.00758			Blatt - Bl
			üb 120 - 400 +/- 0,5	üb 1000 - 2000 +/- 1,2	Alle Rechte ges. DIN34 Absatz. 2.1 vorbe.				Datumme	

BiNaTec GmbH

Berliner Straße 51-55
D-58332 Schwelm
Tel: +49 (0) 2336 / 808-400
Fax: +49 (0) 2336 / 808-414

customer : Titan Umreifungstechnik
plant designation : VS11-S
drawing number :
kommission : Möllers

manufacturer comp.: TITAN Umreifungstechnik GmbH & Co. KG
Berliner Str. 51-55
58332 Schwelm

product :
type :
installation place: Schwelm
partial character.:
special environme.:
location : Beckum
regulation : VDE 0100
enclosure : IP 55

control cabinet: Rittal
power supply : 3 x 480V 60Hz / PE
feed line : 4 x 2,5 mm²
control voltage: 24V DC
year of constr.: 2013

project name : T13079_MOELLERS_VERTIKAL
project path : C:\EPLAN4\P\BINA\

project beginning : 26.08.13
project responsi. Person: Lo Grasso
last change : 26.11.13
last editor : BI9

station number : 009

number of pages : 161

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split X: an automatically produced side was worked over again manually

place	place	page	page designation	page additional field	date	editor	X
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SV==DOKU	A02	1	table of contents		26.11.13	BI9	
SV==DOKU	A02	2	table of contents		26.11.13	BI9	
SV==DOKU	A02	3	table of contents		26.11.13	BI9	
SV==DOKU	A02	4	table of contents		26.11.13	BI9	
SV==DOKU	A02	5	table of contents		26.11.13	BI9	
SV==DOKU	A02	6	table of contents		26.11.13	BI9	
SV==DOKU	A03	1	Plant / location ID overview		26.11.13	BI9	
SV==DOKU	A04	1	terminals definition		26.11.13	BI9	
SV==DOKU	A05	1	Profibus-DP overview		26.11.13	BI9	
SV==DOKU	A06	1	overview terminal housings		26.11.13	BI9	
SV==DOKU	A06	2	overview terminal housings		26.11.13	BI9	
SV==DOKU	P01	1	control desk assembly		26.11.13	BI9	
SV==DOKU	P01	2	control desk assembly desk cover		26.11.13	BI9	
SV==DOKU	P01	3	control desk assembly mounting plates		26.11.13	BI9	
SV==DOKU	L01	1	Position of terminal box dispenser and tape storage ABS		26.11.13	BI9	
SV==DOKU	L01	2	Building control point dispenser and tape storage ABS		26.11.13	BI9	
SV==DOKU	L10	1	main terminal box at the machine		26.11.13	BI9	
SV==DOKU	L10	2	main terminal box at the machine		26.11.13	BI9	
SV==DOKU	L10	3	Terminal box mounting plate		26.11.13	BI9	
SV==DOKU	L18	1	Construction of the terminal box strapping head		26.11.13	BI9	
SV==D01	P01	1	power supply		26.11.13	BI9	
SV==D02	P01	1	dispenser		26.11.13	BI9	
SV==F01	P01	1	power supply 230V ac		26.11.13	BI9	
SV==G01	P01	1	power supply 24V dc		26.11.13	BI9	
SV==G01	P01	1.1	power supply 24V dc		26.11.13	BI9	
SV==G01	P01	2	power supply 24V dc		26.11.13	BI9	
SV==G01	P01	3	power supply 24V DC via emergency stop		26.11.13	BI9	
SV==G01	P01	4	power supply 24V DC via emergency stop and safety door		26.11.13	BI9	
SV==G01	P01	5	power supply 24V dc		26.11.13	BI9	

			date	26.08.13	Titan Umreifungstechnik	TITAN	table of contents	= SV==DOKU	+ A02
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 1
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		6 Sh.

BI_A3J1D

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split X: an automatically produced side was worked over again manually

place	place	page	page designation	page additional field	date	editor	X
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SV==G01	P01	7	power supply 24V dc ups		26.11.13	BI9	
SV==G01	P01	8	power supply 24V dc / to the main terminal housing		26.11.13	BI9	
SV==K01	P01	1	assembly s7-300 rack		26.11.13	BI9	
SV==K01	P01	2	assembly s7-300 rack		26.11.13	BI9	
SV==K01	P01	3	reserve		26.11.13	BI9	
SV==K01	P01	5	Occupancy digital input / output		26.11.13	BI9	
SV==K01	P01	6	allocation digital intput group		26.11.13	BI9	
SV==K01	P01	7	allocation digital intput group		26.11.13	BI9	
SV==K01	P01	8	allocation digital output group		26.11.13	BI9	
SV==K01	P01	9	counter module		26.11.13	BI9	
SV==K01	P01	10	Occupancy digital input / digital output		26.11.13	BI9	
SV==K01	P01	11	Operator Panel 177B		26.11.13	BI9	
SV==L01	P01	1	plc input byte 2		26.11.13	BI9	
SV==L01	P01	2	plc input byte 3		26.11.13	BI9	
SV==L01	P01	3	plc input byte 4		26.11.13	BI9	
SV==L01	P01	4	plc input byte 5		26.11.13	BI9	
SV==L01	P01	5	plc input byte 6		26.11.13	BI9	
SV==L01	P01	6	plc input byte 7		26.11.13	BI9	
SV==L01	P01	7	plc input byte 8		26.11.13	BI9	
SV==L01	P01	8	plc input byte 9		26.11.13	BI9	
SV==L01	P01	9	plc input byte 10		26.11.13	BI9	
SV==L01	P01	10	plc input byte 11		26.11.13	BI9	
SV==L01	P01	11	plc counter module		26.11.13	BI9	
SV==L01	P01	12	plc counter module		26.11.13	BI9	
SV==L01	P01	13	plc input byte 12		26.11.13	BI9	
SV==M01	P01	1	plc output byte 10		26.11.13	BI9	
SV==M01	P01	2	plc output byte 11		26.11.13	BI9	
SV==M01	P01	3	plc output byte 12		26.11.13	BI9	
SV==M01	P01	4	plc output byte 13		26.11.13	BI9	

1 3

			date	26.08.13	Titan Umreifungstechnik	TITAN	table of contents	= SV==DOKU	+ A02
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 2
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers		6 Sh.

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split X: an automatically produced side was worked over again manually

place	place	page	page designation	page additional field	date	editor	X
SV==M01	P01	5	plc output byte 14		26.11.13	BI9	
SV==M01	P01	6	plc output byte 15		26.11.13	BI9	
SV==M01	P01	7	plc counter module		26.11.13	BI9	
SV==M01	P01	8	plc output byte 16		26.11.13	BI9	
SV==G10	L10	1	24V power supply in the main terminal box		26.11.13	BI9	
SV==N01	P01	1	emergency stop loop		26.11.13	BI9	
SV==N01	P01	2	empty sheet		26.11.13	BI9	
SV==N01	P01	3	emergency stop module		26.11.13	BI9	
SV==N01	P01	4	emergency stop extension module		26.11.13	BI9	
SV==N02	P01	1	empty sheet		26.11.13	BI9	
SV==N02	P01	2	empty sheet		26.11.13	BI9	
SV==N02	P01	3	safety door module		26.11.13	BI9	
SV==N02	P01	4	safety door extension module		26.11.13	BI9	
SV==X01	P01	1	signal exchange security vertical machine <-> Horizontal	machine	26.11.13	BI9	
SV==X02	P01	1	signal exchange safety door customer control <-> P.W. Lenzen		26.11.13	BI9	
SV==X03	P01	1	signal exchange customer control -> BiNaTec		26.11.13	BI9	
SV==X03	P01	2	signal exchange BiNaTec -> customer control		26.11.13	BI9	
SV==X03	P01	3	signal exchange home position		26.11.13	BI9	
SV==AUSW	P01	1	terminal strip and connector overview		26.11.13	BI9	
SV==AUSW	P01	2	=SV==D01+P01-X1		26.11.13	BI9	
SV==AUSW	P01	3	=SV==D02+P01-X3		26.11.13	BI9	
SV==AUSW	P01	4	=SV==F01+P01-X11		26.11.13	BI9	
SV==AUSW	P01	5	=SV==G01+P01-X10		26.11.13	BI9	
SV==AUSW	P01	6	=SV==G01+P01-X13		26.11.13	BI9	
SV==AUSW	P01	7	=SV==L01+P01-X15		26.11.13	BI9	
SV==AUSW	P01	8	=SV==L01+P01-X15		26.11.13	BI9	
SV==AUSW	P01	9	=SV==L01+P01-X15		26.11.13	BI9	
SV==AUSW	P01	10	=SV==M01+P01-X16		26.11.13	BI9	
SV==AUSW	P01	11	=SV==M01+P01-X16		26.11.13	BI9	
SV==AUSW	P01	12	=SV==N01+P01-X13		26.11.13	BI9	

			date	26.08.13	Titan Umreifungstechnik	TITAN	table of contents	= SV==DOKU	+ A02
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 3
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		6 Sh.

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split X: an automatically produced side was worked over again manually

place	place	page	page designation	page additional field	date	editor	X
SV==AUSW	P01	13	=SV==X01+P01-X23		26.11.13	BI9	
SV==AUSW	P01	14	=SV==X02+P01-X24		26.11.13	BI9	
SV==AUSW	P01	15	=SV==X03+P01-X25		26.11.13	BI9	
SV==AUSW	P01	16	=SV==X03+P01-X26		26.11.13	BI9	
SV==AUSW	P01	17	cable overview		26.11.13	BI9	
SV==AUSW	P01	18	=SV==D01+P01-W11		26.11.13	BI9	
SV==AUSW	P01	19	=SV==D02+P01-W11		26.11.13	BI9	
SV==AUSW	P01	20	=SV==F01+P01-W24		26.11.13	BI9	
SV==AUSW	P01	21	=SV==G01+P01-W10		26.11.13	BI9	
SV==AUSW	P01	22	=SV==G01+P01-W12		26.11.13	BI9	
SV==AUSW	P01	23	=SV==K01+P01-W111		26.11.13	BI9	
SV==AUSW	P01	24	=SV==L01+P01-W51		26.11.13	BI9	
SV==AUSW	P01	25	=SV==L01+P01-W71		26.11.13	BI9	
SV==AUSW	P01	26	=SV==M01+P01-W21		26.11.13	BI9	
SV==AUSW	P01	27	=SV==G10+P01-W12		26.11.13	BI9	
SV==AUSW	P01	28	=SV==X01+P01-W11		26.11.13	BI9	
SV==AUSW	P01	29	=SV==X02+P01-W11		26.11.13	BI9	
SV==AUSW	P01	30	=SV==X03+P01-W11		26.11.13	BI9	
SV==AUSW	P01	31	=SV==X03+P01-W20		26.11.13	BI9	
SV==AUSW	P01	32	parts list		26.11.13	BI9	
SV==AUSW	P01	33	parts list		26.11.13	BI9	
SV==AUSW	P01	34	parts list		26.11.13	BI9	
SV==AUSW	P01	35	parts list		26.11.13	BI9	
SV==AUSW	L01	1	terminal strip and connector overview		26.11.13	BI9	
SV==AUSW	L01	2	=SV==D02+L01-X3		26.11.13	BI9	
SV==AUSW	L01	3	=SV==L01+L01-X15		26.11.13	BI9	
SV==AUSW	L01	4	cable overview		26.11.13	BI9	
SV==AUSW	L01	5	=SV==D02+L01-W11		26.11.13	BI9	
SV==AUSW	L01	6	=SV==L01+L01-W103		26.11.13	BI9	
SV==AUSW	L01	7	=SV==L01+L01-W104		26.11.13	BI9	

			date	26.08.13	Titan Umreifungstechnik	TITAN	table of contents	= SV==DOKU	+ A02
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 4
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		6 Sh.

BI_A3J1D

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split X: an automatically produced side was worked over again manually

place	place	page	page designation	page additional field	date	editor	X
SV==AUSW	L01	8	=SV==L01+L01-W105		26.11.13	BI9	
SV==AUSW	L01	9	=SV==L01+L01-W108		26.11.13	BI9	
SV==AUSW	L01	10	parts list		26.11.13	BI9	
SV==AUSW	L10	1	terminal strip and connector overview		26.11.13	BI9	
SV==AUSW	L10	2	=SV==D02+L10-X3		26.11.13	BI9	
SV==AUSW	L10	3	=SV==L01+L10-X15		26.11.13	BI9	
SV==AUSW	L10	4	=SV==L01+L10-X15		26.11.13	BI9	
SV==AUSW	L10	5	=SV==L01+L10-X15		26.11.13	BI9	
SV==AUSW	L10	6	=SV==L01+L10-X15		26.11.13	BI9	
SV==AUSW	L10	7	=SV==M01+L10-X16		26.11.13	BI9	
SV==AUSW	L10	8	=SV==M01+L10-X16		26.11.13	BI9	
SV==AUSW	L10	9	=SV==G10+L10-X13		26.11.13	BI9	
SV==AUSW	L10	10	cable overview		26.11.13	BI9	
SV==AUSW	L10	11	=SV==D02+L10-W11		26.11.13	BI9	
SV==AUSW	L10	12	=SV==L01+L10-W51		26.11.13	BI9	
SV==AUSW	L10	13	=SV==L01+L10-W53		26.11.13	BI9	
SV==AUSW	L10	14	=SV==L01+L10-W55		26.11.13	BI9	
SV==AUSW	L10	15	=SV==L01+L10-W57		26.11.13	BI9	
SV==AUSW	L10	16	=SV==L01+L10-W61		26.11.13	BI9	
SV==AUSW	L10	17	=SV==L01+L10-W64		26.11.13	BI9	
SV==AUSW	L10	18	=SV==L01+L10-W65		26.11.13	BI9	
SV==AUSW	L10	19	=SV==L01+L10-W71		26.11.13	BI9	
SV==AUSW	L10	20	=SV==L01+L10-W76		26.11.13	BI9	
SV==AUSW	L10	21	=SV==L01+L10-W77		26.11.13	BI9	
SV==AUSW	L10	22	=SV==M01+L10-W41		26.11.13	BI9	
SV==AUSW	L10	23	=SV==M01+L10-W42		26.11.13	BI9	
SV==AUSW	L10	24	=SV==M01+L10-W43		26.11.13	BI9	
SV==AUSW	L10	25	=SV==M01+L10-W44		26.11.13	BI9	
SV==AUSW	L10	26	=SV==M01+L10-W45		26.11.13	BI9	
SV==AUSW	L10	27	=SV==M01+L10-W47		26.11.13	BI9	

change	date	name					
			date	26.08.13	Titan Umreifungstechnik	TITAN	table of contents
			editor	Lo Grasso	Berliner Straße 51-55		
			check.	26.11.13	58332 Schwelm		VS11-S
			standa	VDE 0100	origin / replace for / replace through		Möllers

= SV==DOKU | + A02

T13079

Sh. 5
6 Sh.

table of contents

split X: an automatically produced side was worked over again manually

place	place	page	page designation	page additional field	date	editor	X
SV==AUSW	L10	28	=SV==M01+L10-W48		26.11.13	BI9	
SV==AUSW	L10	29	parts list		26.11.13	BI9	
SV==AUSW	L18	1	terminal strip and connector overview		26.11.13	BI9	
SV==AUSW	L18	2	=SV==L01+L18-XK1		26.11.13	BI9	
SV==AUSW	L18	3	=SV==L01+L18-XK1		26.11.13	BI9	
SV==AUSW	L18	4	=SV==L01+L18-XK1		26.11.13	BI9	
SV==AUSW	L18	5	=SV==L01+L18-XS1		26.11.13	BI9	
SV==AUSW	L18	6	parts list		26.11.13	BI9	
SV==AUSW	S15	1	parts list		26.11.13	BI9	
SV==AUSW	LK25	1	cable overview		26.11.13	BI9	
SV==AUSW	LK25	2	=SV==X03+LK25-W11		26.11.13	BI9	

			date	26.08.13	Titan Umreifungstechnik		table of contents	= SV==DOKU	+ A02		
			editor	Lo Grasso	Berliner Straße 51-55	TITAN					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 6	
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			6 Sh.

BI_A3Y001D

Higher-level assignment / Location designation

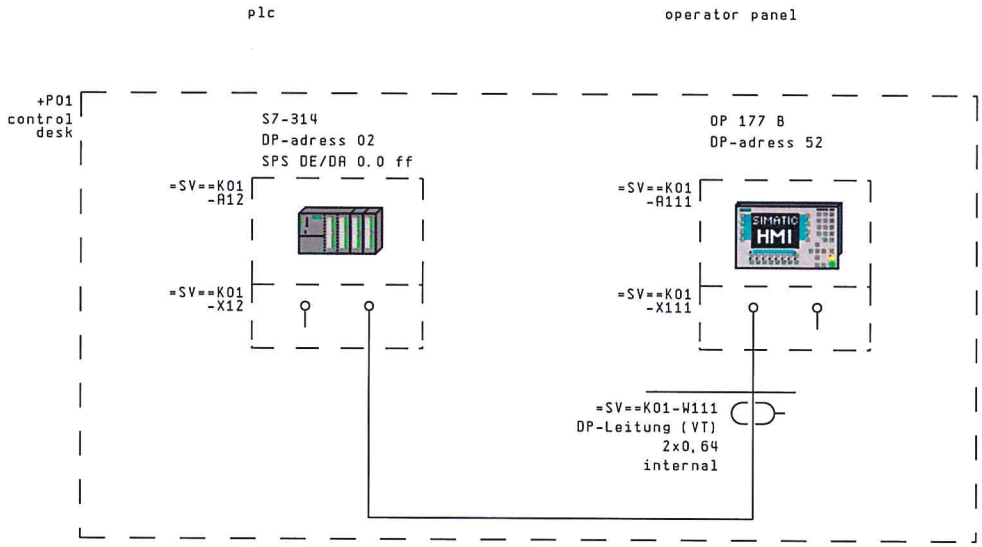
plant tag	plant description	location tag	topography
=SV==DOKU		+A01	cover sheet
=SV==D01		+A02	table of contents
=SV==D02		+A03	Plant / location ID overview
=SV==F01		+A04	terminals definition
=SV==G01		+A05	Profibus-DP overview
=SV==K01		+A06	overview wiring
=SV==L01		+P01	control desk
=SV==M01		+L01	tape storage ABS
=SV==G10		+L10	main terminal box at the machine
=SV==N01		+L18	terminal box at machine
=SV==N02		+S15	control device strapping head
=SV==X01		+LK23	signal exchange emergency stop
=SV==X02		+LK24	signal exchange safety door
=SV==X03		+LK25	signal exchange home position
=SV==AUSW		+IBN	for bringing into service only

			date	26.08.13	Titan Umreifungstechnik	TITAN	Plant / location ID overview	= SV==DOKU	+ A03
			editor	Lo Grasso	Berliner Straße 51-55			T13079	Sh. 1
			check.	26.11.13	58332 Schwelm		VS11-S		1 Sh.
change	date	name	standa	VDE 0100	origin / replace for / replace through		Möllers		

terminal designation:	installation place:	terminal designation:	installation place:
=SV==DO1+PO1-X1=supply	control desk	=SV==DO2+L10-X3=dispenser	main terminal housing
=SV==DO2+PO1-X3=dispenser	control desk	=SV==LO1+L10-X15=PLC inputs and power supply 24V DC	main terminal housing
=SV==FO1+PO1-X11=power supply 230V AC	control desk	=SV==MO1+L10-X16=PLC outputs	main terminal housing
=SV==GO1+PO1-X10=power supply für 24V DC power supply units	control desk	=SV==G10+L10-X13=power supply 24V DC	main terminal housing
=SV==GO1+PO1-X11=power supply 230V	control desk		
=SV==GO1+PO1-X12=power supply 230V	control desk		
=SV==GO1+PO1-X13=power supply 24V DC	control desk	=SV==LO1+L18-X15=PLC inputs	terminal box at machine
=SV==LO1+PO1-X15=PLC inputs and power supply 24V DC	control desk	=SV==MO1+L18-X16=PLC outputs	terminal box at machine
=SV==MO1+PO1-X16=PLC outputs	control desk	=SV==LO1+L18-XK1=strapping head	terminal box at machine
=SV==NO1+PO1-X13=emergency stop	control desk	=SV==LO1+L18-XS1=strapping head	terminal box at machine
=SV==XO1+PO1-X23=Signal exchange emergency stop	control desk	=SV==MO1+L18-XK1=strapping head	terminal box at machine
=SV==XO2+PO1-X24=Signal exchange protection door	control desk	=SV==MO1+L18-XS1=strapping head	terminal box at machine
=SV==XO3+PO1-X25=Exchange of signals by customer <-> Binatec	control desk		
=SV==XO3+PO1-X26=Signal exchange Binatec <-> by customer	control desk		
=SV==DO2+LO1-X3=dispenser drive	terminal box dispenser		
=SV==LO1+LO1-X15=dispenser strip storage	terminal box dispenser		

+A03/1 +A05/1

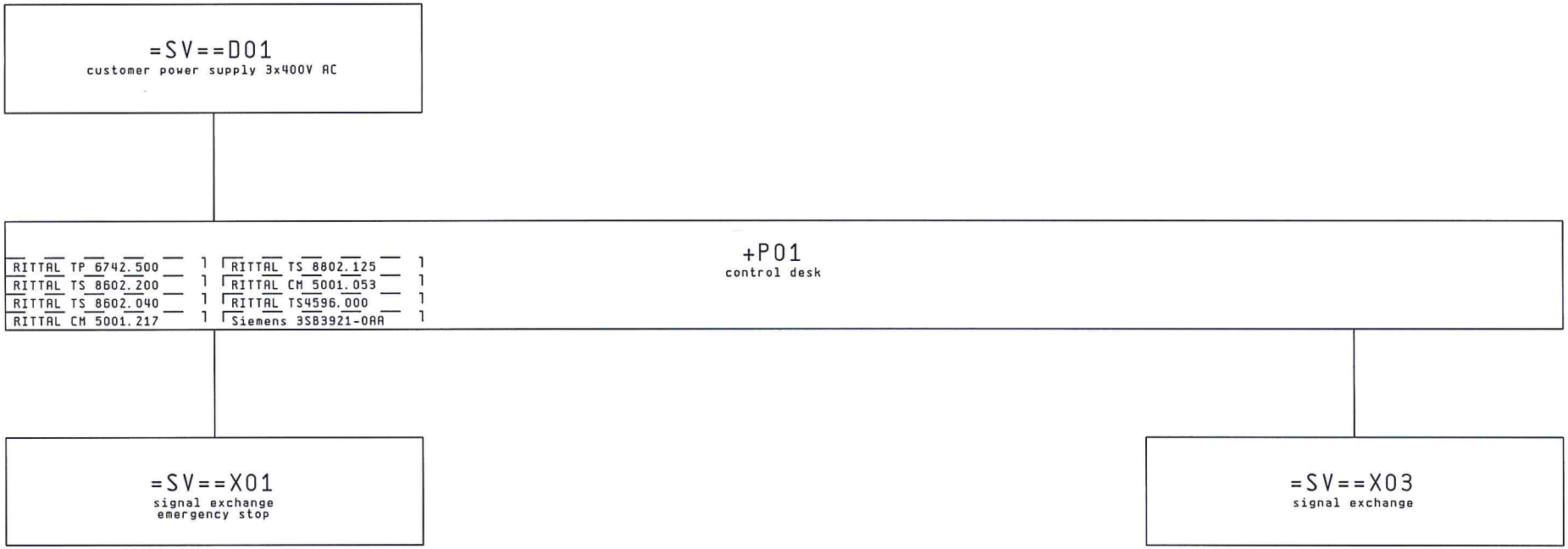
			date	26.08.13	Titan Umreifungstechnik	TITAN	terminals definition	= SV==DOKU	+ A04		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh.	1
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		1 Sh.	



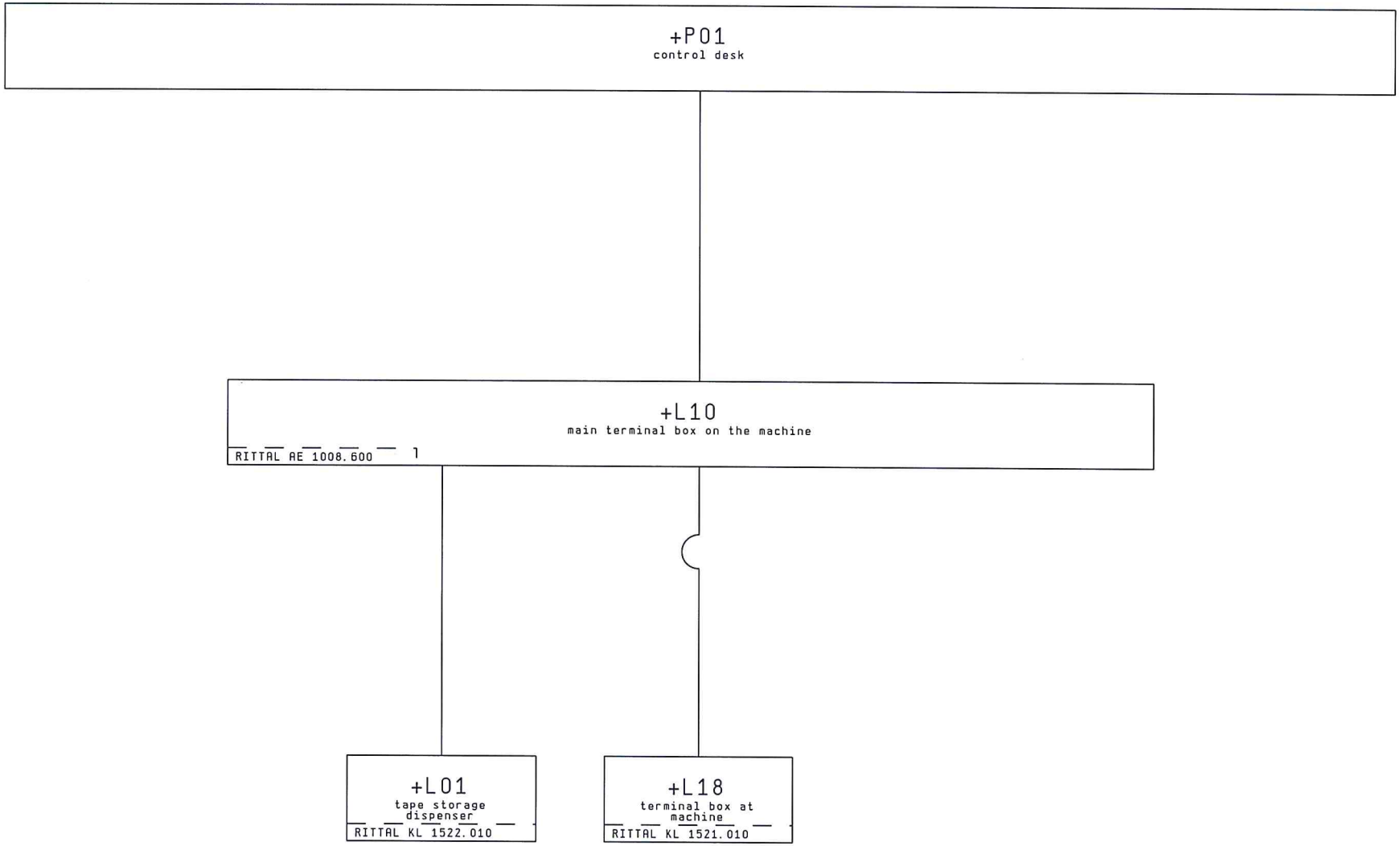
+A04/1

+A06/1

			date	26.08.13	Titan Umreifungstechnik		TITAN	Profibus-DP overview	= SV==DOKU	+ A05
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm			VS11-S	T13079	Sh. 1
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		1 Sh.



			date	26.08.13	Titan Umreifungstechnik		overview terminal housings	= SV==DOKU	+ A06		
			editor	Lo Grasso	Berliner Straße 51-55	TITAN					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079			Sh. 1
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			2 Sh.



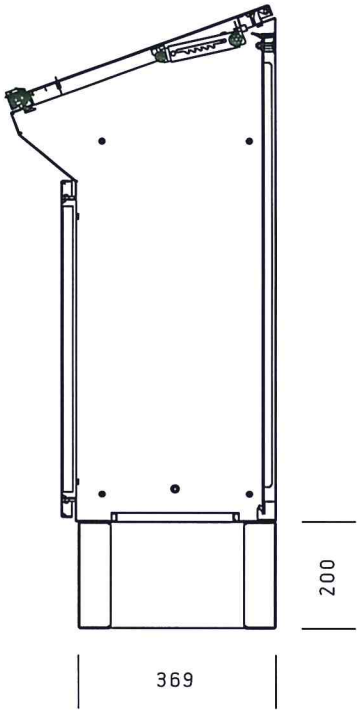
1

+P01/1

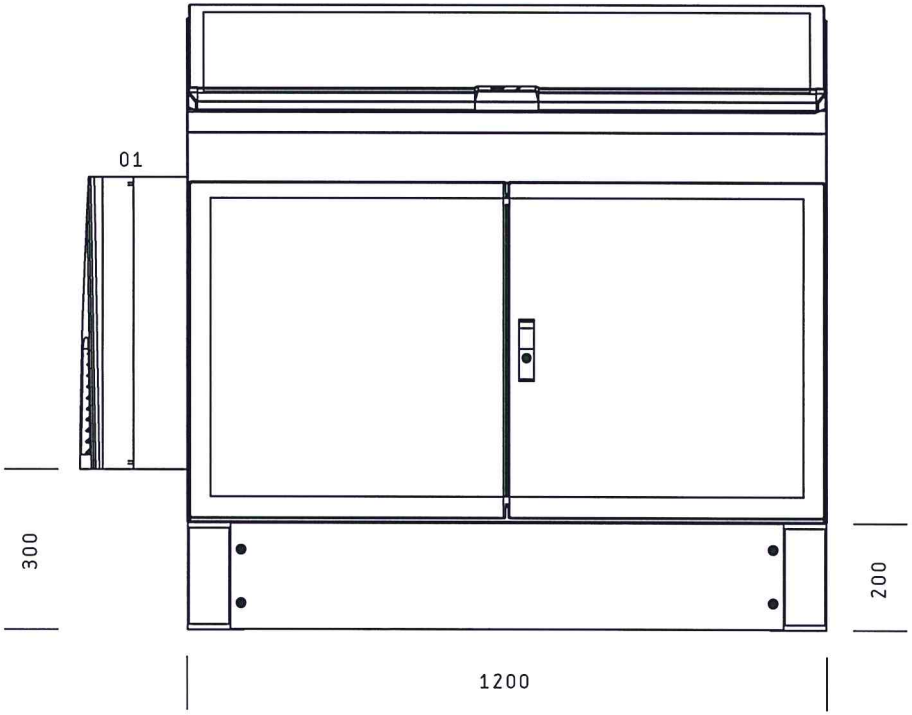
			date	26.08.13	Titan Umreifungstechnik	TITAN	overview terminal housings	= SV==DOKU	+ A06
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 2
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		2 Sh.

control desk assembly: +P01

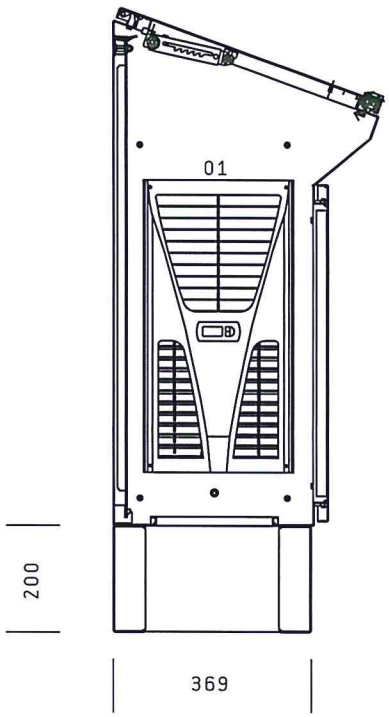
side view from the right



front view



side view from left



pos.-no.	bmk	description
01		air conditioner
02		
03		
04		

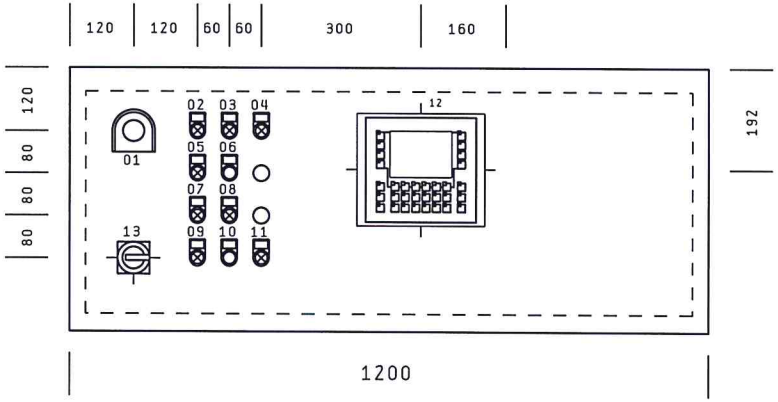
+A06/2

			date	26.08.13	Titan Umreifungstechnik		control desk assembly	= SV==DOKU	+P01
			editor	Lo Grasso	Berliner Straße 51-55	TITAN			
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 1
change	date	name	standa	VDE 0100	origin / replace for / replace through		Möllers		3 Sh.

control desk assembly: +P01

control elements legend

- emercy stop pushbutton
- pushbutton
- iluminated pushbutton
- indicator lamp
- selector switch
- key-operated switch
- potentiometer
- BCD switch
- BCD display
- dummy plug
- main switch



pos.-no.	bmk	description	color
01	=SV==N01-S11	emergency stop	BK/YE
02	=SV==N01-S33 / =SV==M01-H68	emergency stop acknowledge	RD
03	=SV==L01-S97 / =SV==M01-H65	fault acknowledge	RD
04	=SV==L01-S98 / =SV==M01-H66	drive to home position	WH
05	=SV==L01-S91 / =SV==M01-H61	control on	GN
06	=SV==L01-S92	control off	RD
07	=SV==L01-S93 / =SV==M01-H62	manual mode	WH
08	=SV==L01-S94 / =SV==M01-H63	automatic	GN
09	=SV==L01-S95 / =SV==M01-H64	cycle start	GN
10	=SV==L01-S96	cycle stop	RD
11	=SV==L01-S101 / =SV==M01-H67	release transport	YE
12	=SV==K01-A111	operator panel	OP 177B
13	=SV==D01-Q11	main switch	RD/YE
14			
15			

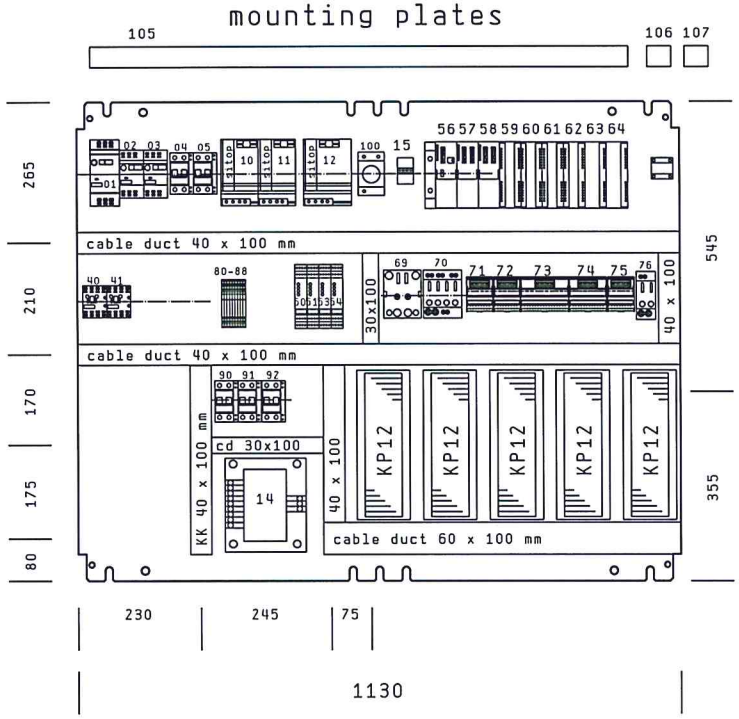
1 3

			date	26.08.13	Titan Umreifungstechnik		control desk assembly desk cover	= SV==DOKU	+ P01
			editor	Lo Grasso	Berliner Straße 51-55	TITANO			
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 2
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers		3 Sh.

control desk assembly: +P01

pos.-no.	bmk
01	=SV==D01-Q15
02	=SV==D02-Q12
03	=SV==F01-Q11
04	=SV==G01-F14
05	=SV==G01-F16
06	
07	
08	
09	
10	=SV==G01-G14
11	=SV==G01-G16
12	=SV==G01-G1.11
13	
14	=SV==F01-T11
15	=SV==M01-A38
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	
36	
37	
38	
39	
40	=SV==M01-K51
41	=SV==M01-K52
42	
43	
44	
45	
46	
47	
48	
49	
50	=SV==N01-K32
51	=SV==N01-K42
52	
53	=SV==N02-K32
54	=SV==N02-K42
55	

mounting plates



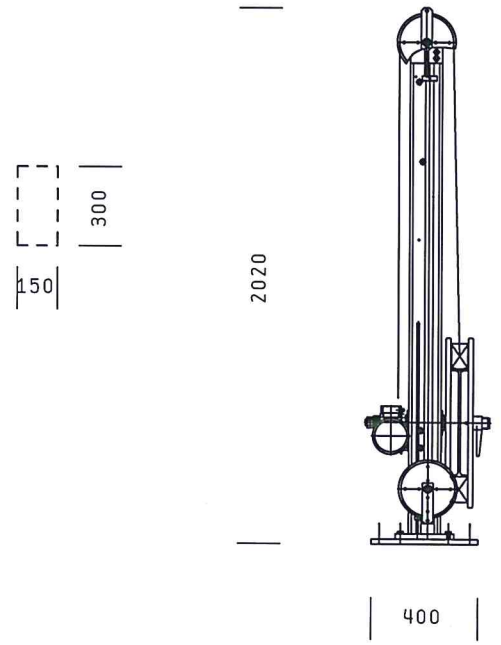
pos.-no.	bmk
56	=SV==K01-A12
57	=SV==K01-A13
58	=SV==K01-A14
59	=SV==K01-A16
60	=SV==K01-A22
61	=SV==K01-A23
62	=SV==K01-A24
63	=SV==K01-A25
64	=SV==K01-A26
65	
66	
67	
68	
69	=SV==G01-A22
70	=SV==G01-F1.11
71	=SV==G01-X34
72	=SV==G01-X44
73	=SV==G01-X54
74	=SV==G01-X64
75	=SV==G01-X74
76	=SV==G01-F22
77	
78	
79	
80	=SV==M01-K16
81	=SV==M01-K81
82	=SV==M01-K82
83	=SV==M01-K83
84	=SV==M01-K84
85	=SV==M01-K85
86	=SV==M01-K86
87	=SV==M01-K87
88	=SV==M01-K88
89	
90	=SV==F01-F11
91	=SV==F01-F15
92	=SV==F01-F18
93	
94	
95	
96	
97	
98	
99	
100	=SV==F01-X15
101	
102	
103	
104	
105	=SV==F01-E16
106	=SV==F01-S16
107	=SV==F01-S18
108	
109	
110	

+L01/1

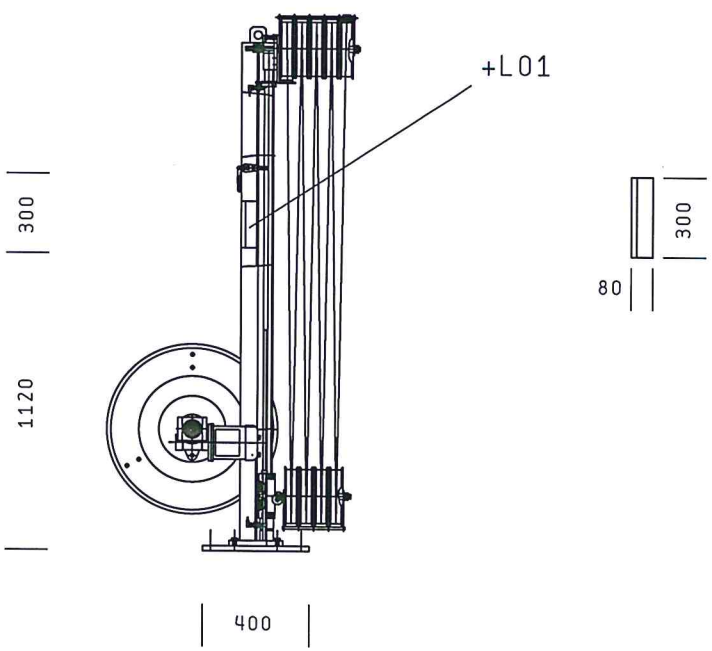
			date	26.08.13	Titan Umreifungstechnik	TITAN	control desk assembly mounting plates	= SV==DOKU	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 3
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		3 Sh.

assembly: +L01

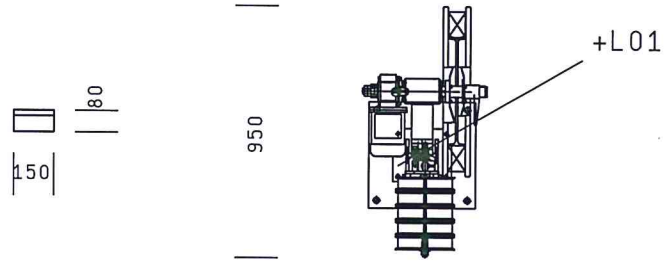
front view



side view from left



view from top



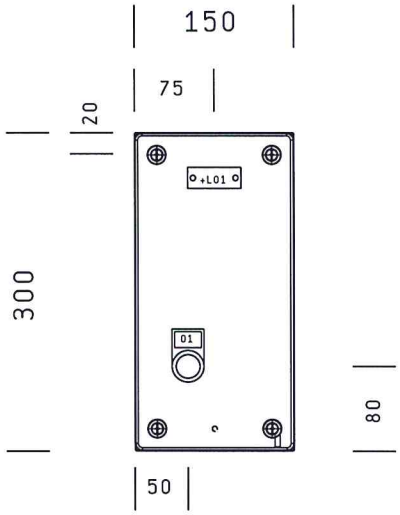
+P01/3

2

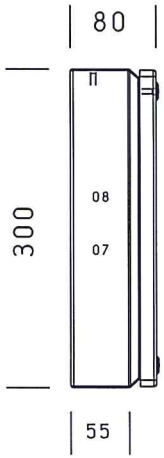
			date	26.08.13	Titan Umreifungstechnik	TITAN	Position of terminal box dispenser and tape storage ABS VS11-S	= SV==DOKU	+L01
			editor	Lo Grasso	Berliner Straße 51-55			T13079	Sh. 1
			check.	26.11.13	58332 Schwelm				2 Sh.
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers	

assembly: +L01

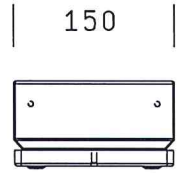
front view



side view from left



assembly from top



control elements legend

pushbutton

dummy plug

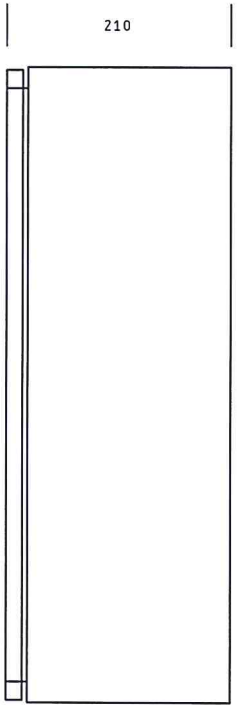
pos.-no.	bmk	description	color
1			
2			
3			
4	=L01-S54	dispenser step by step	black
5			
6			
7	=D02-X3	terminal rail	
8	=L01-X15	terminal rail	

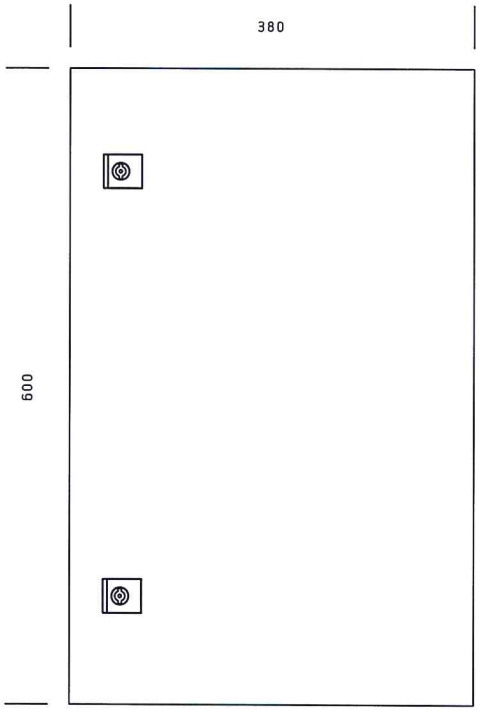
			date	26.08.13	Titan Umreifungstechnik	TITAN	Building control point dispenser	= SV==DOKU	+L01
			editor	Lo Grasso	Berliner Straße 51-55		and tape storage ABS		
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 2
change	date	name	standa	VDE 0100	origin / replace for / replace through		Möllers		2 Sh.

assembly: +L10

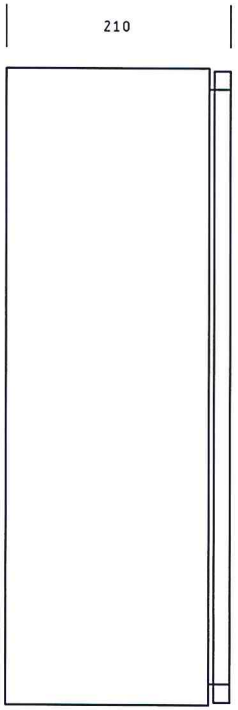
Rittal AE 1038.500

side view from the right





side view from left



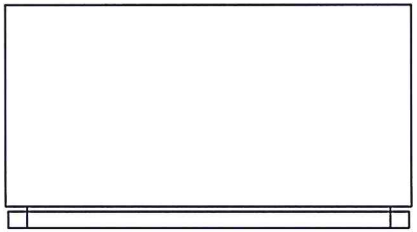
+L01/2

			date	26.08.13	Titan Umreifungstechnik	TITAN	main terminal box at the machine	= SV==DOKU	+L10	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 1
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		3 Sh.

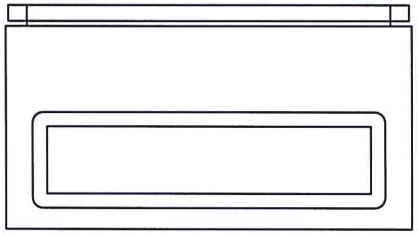
assembly: +L10

Rittal AE 1038.500

assembly from top



assembly from bottom



1

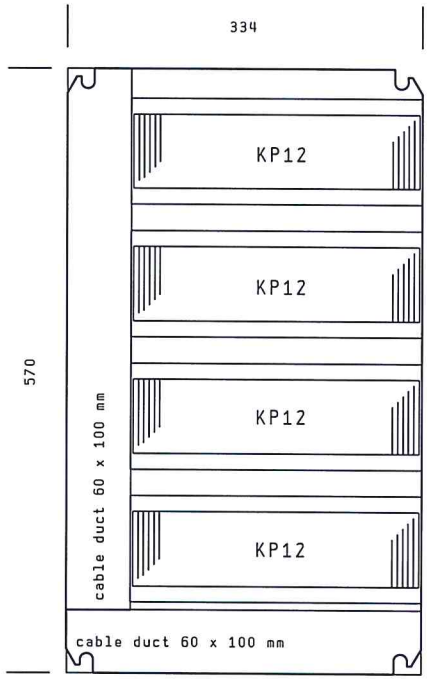
3

			date	26.08.13	Titan Umreifungstechnik		main terminal box at the machine	= SV==DOKU	+L10		
			editor	Lo Grasso	Berliner Straße 51-55	TITAN					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh.	2
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			3 Sh.

assembly: +L10

Rittal AE 1038.500

mounting plate



2

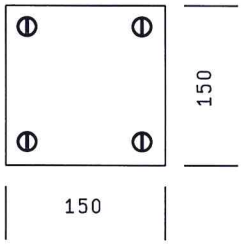
+L18/1

			date	26.08.13	Titan Umreifungstechnik		Terminal box mounting plate	= SV==DOKU	+L10	
			editor	Lo Grasso	Berliner Straße 51-55	TITAN				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 3
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers			3 Sh.

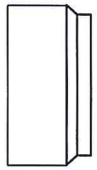
assembly: +L18

Rittal KL 1521.010

front view



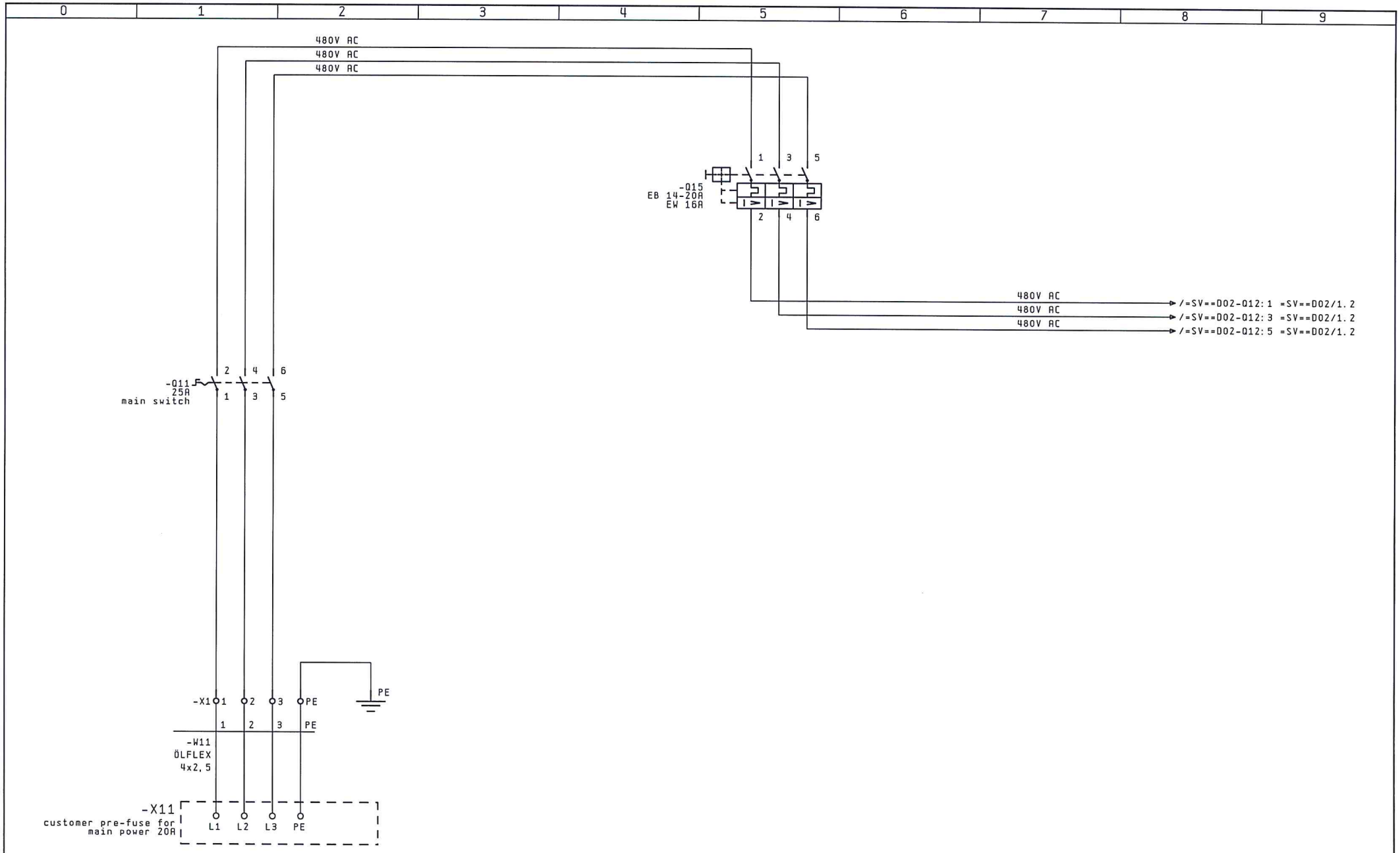
side view from left



+L10/3

=SV==D01+P01/1

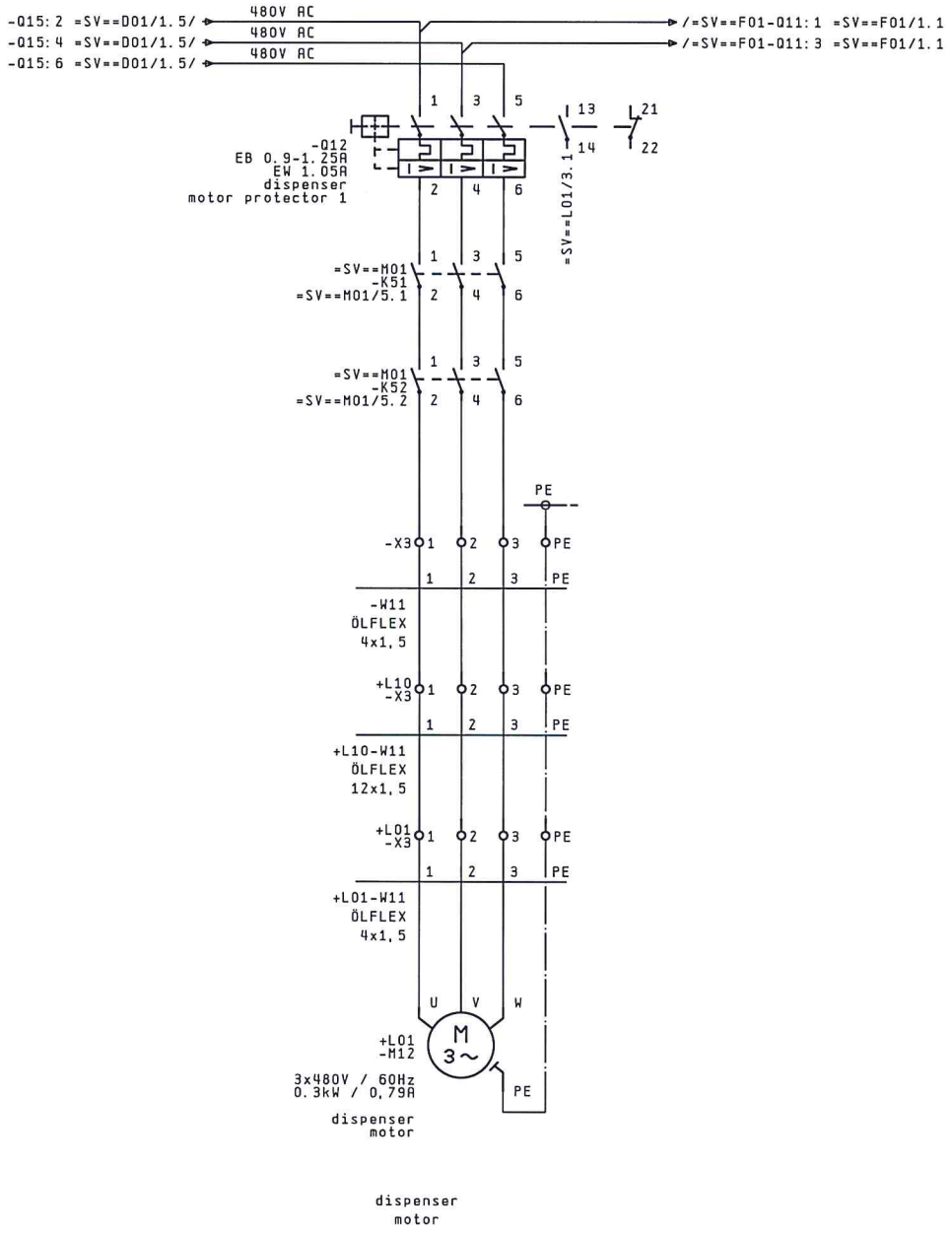
			date	26.08.13	Titan Umreifungstechnik	TITAN	Construction of the terminal box strapping head	=SV==DOKU	+L18		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh.	1
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			1 Sh.



=SV==D0KU+L18/1

=SV==D02/1

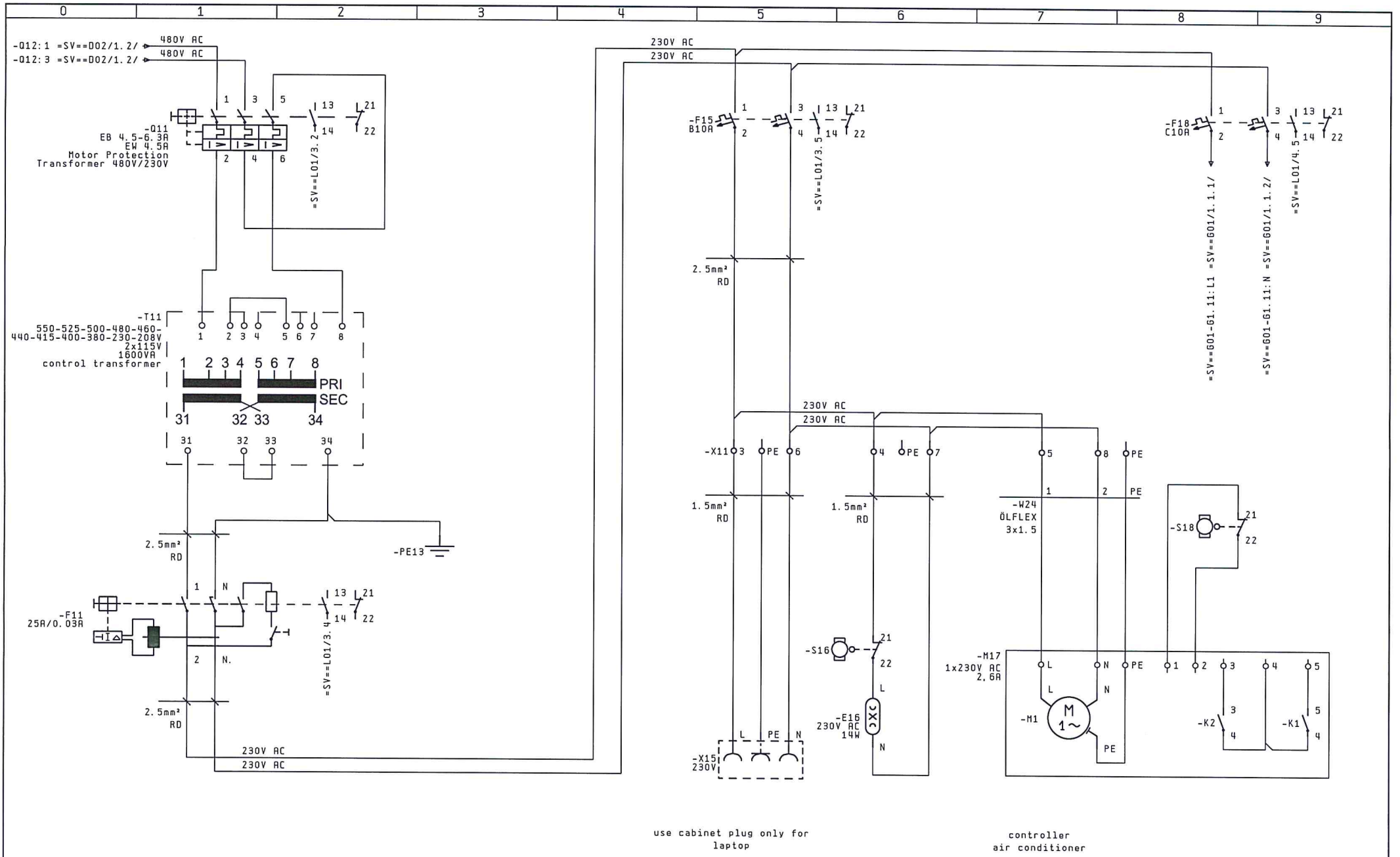
			date	26.08.13	Titan Umreifungstechnik		power supply	= SV==D01	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh.	1
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		1 Sh.	



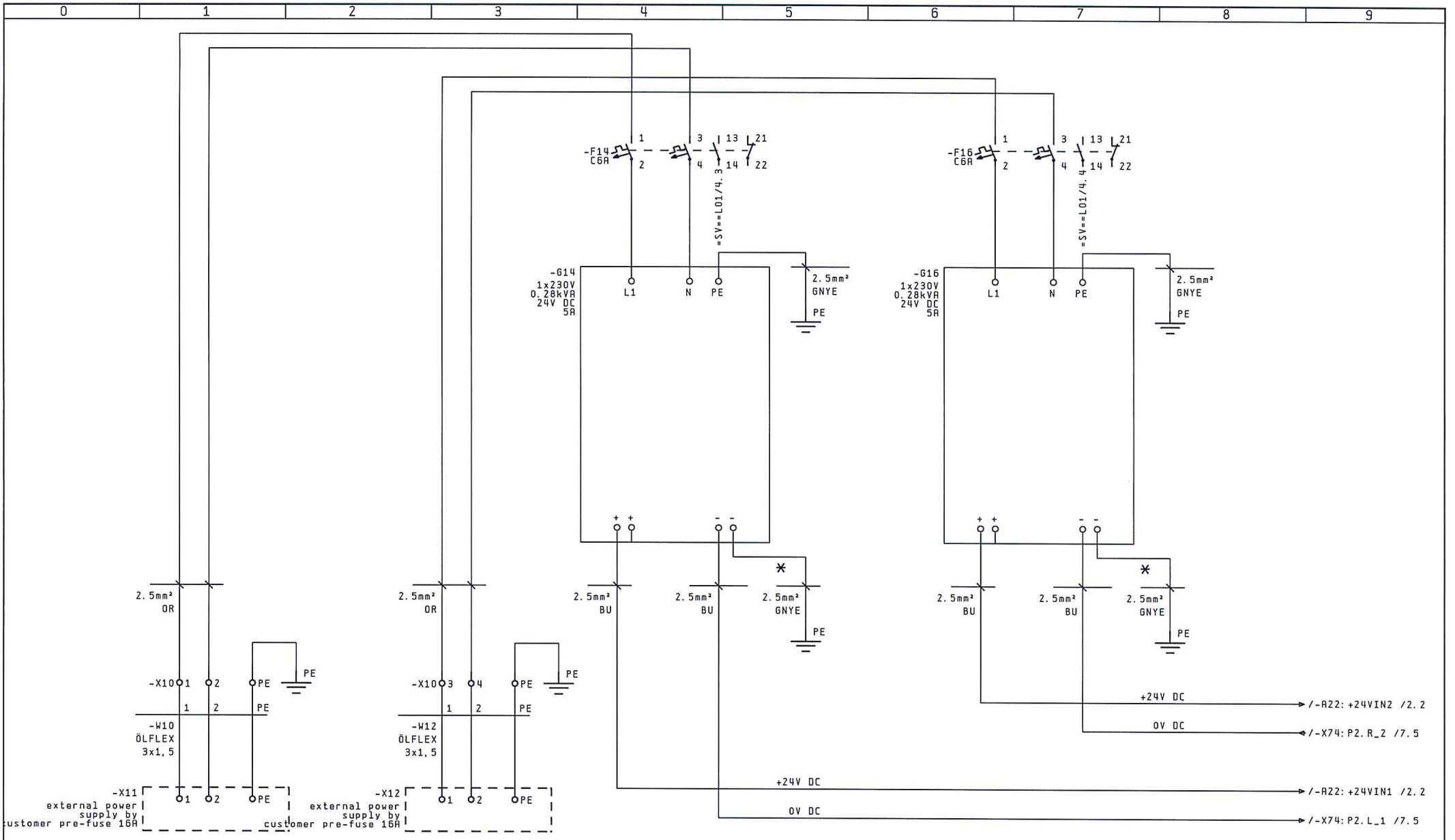
=SV==D01/1

=SV==F01/1

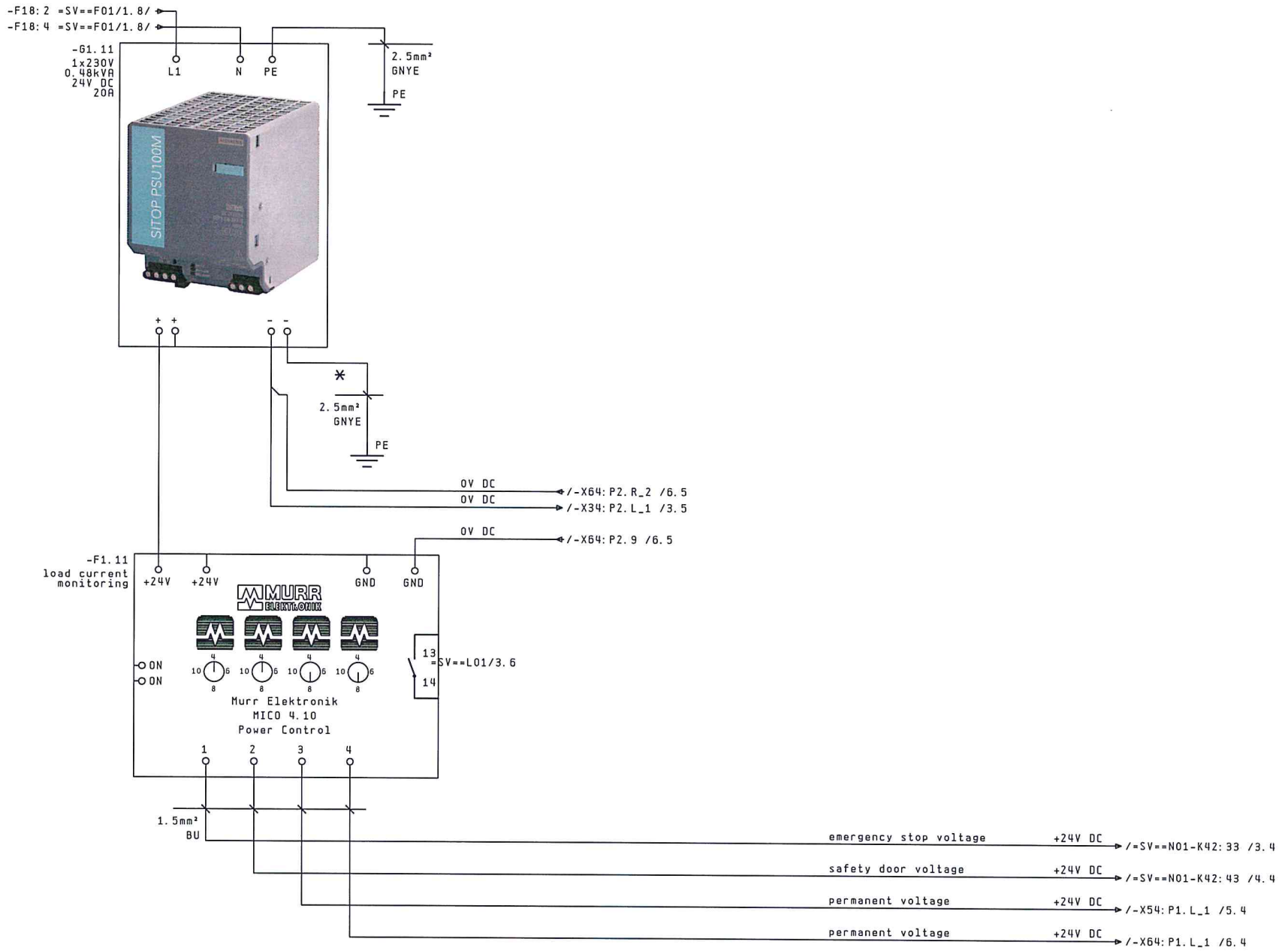
			date	26.08.13	Titan Umreifungstechnik	TITAN	dispenser	= SV==D02	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh.	1
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		1 Sh.	



			date	26.08.13	Titan Umreifungstechnik	TITAN	power supply 230V ac	= SV==F01	+ P01	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 1
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		1 Sh.

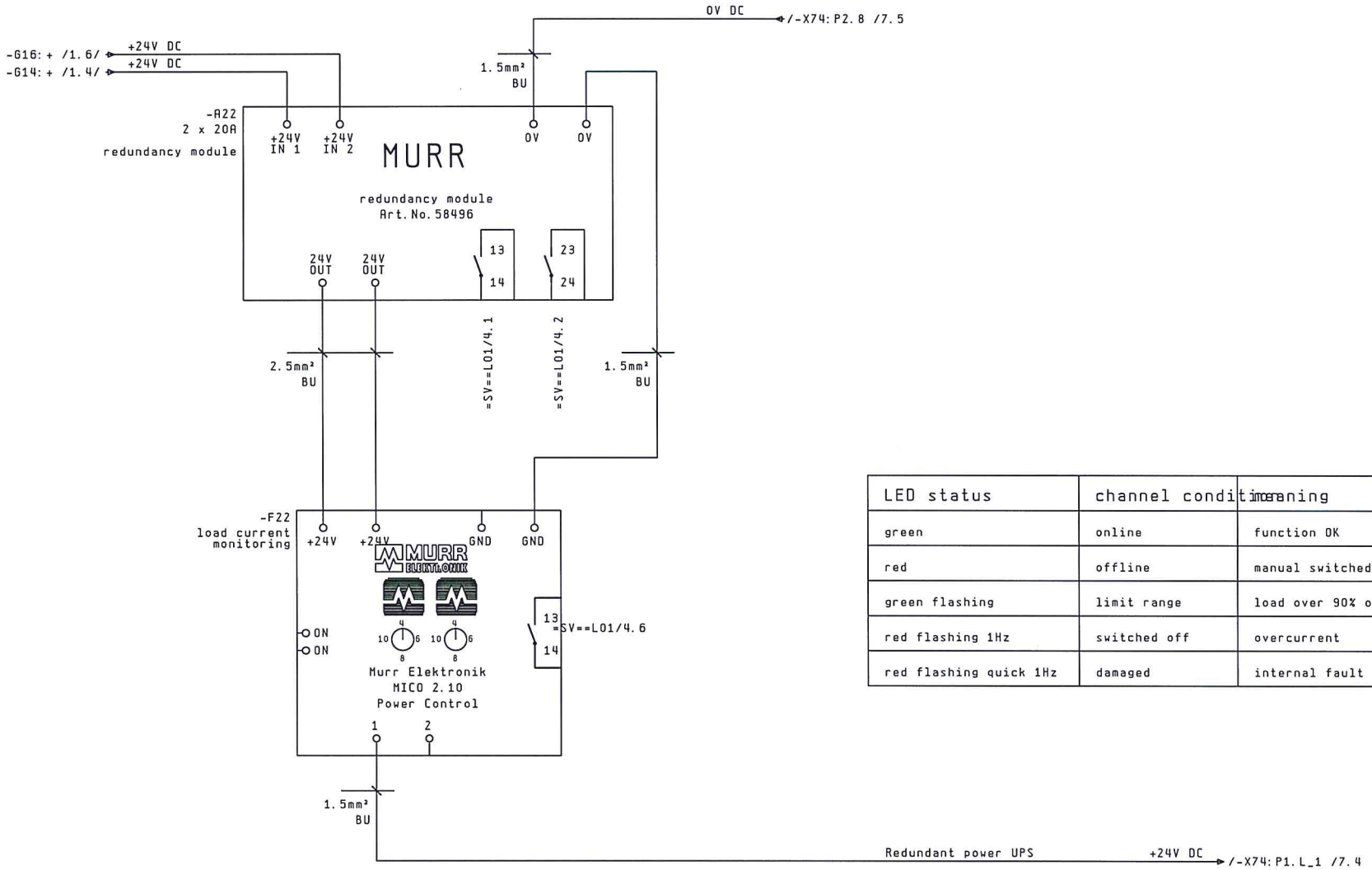


			date	26.08.13	Titan Umreifungstechnik		power supply 24V dc	= SV==G01	+ P01	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 1
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers			8 Sh.



* removing this conection you have to install an isolation supervision according to the VDE 0113.

			date	26.08.13	Titan Umreifungstechnik	TITAN	power supply 24V dc	= SV==G01	+ P01	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 1.1
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		8 Sh.

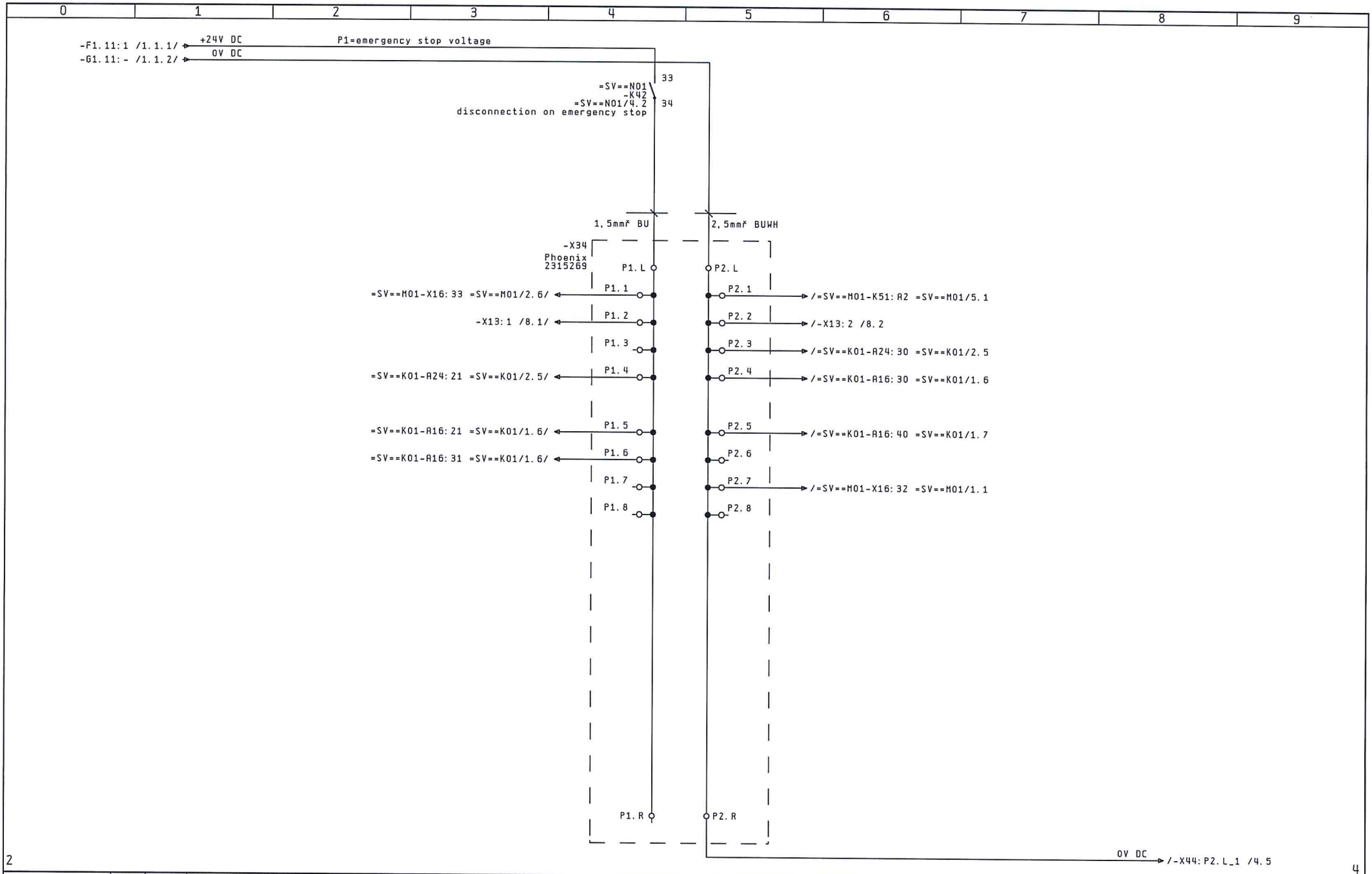


LED status	channel condition	meaning
green	online	function OK
red	offline	manual switched off
green flashing	limit range	load over 90% of operating current
red flashing 1Hz	switched off	overcurrent
red flashing quick 1Hz	damaged	internal fault

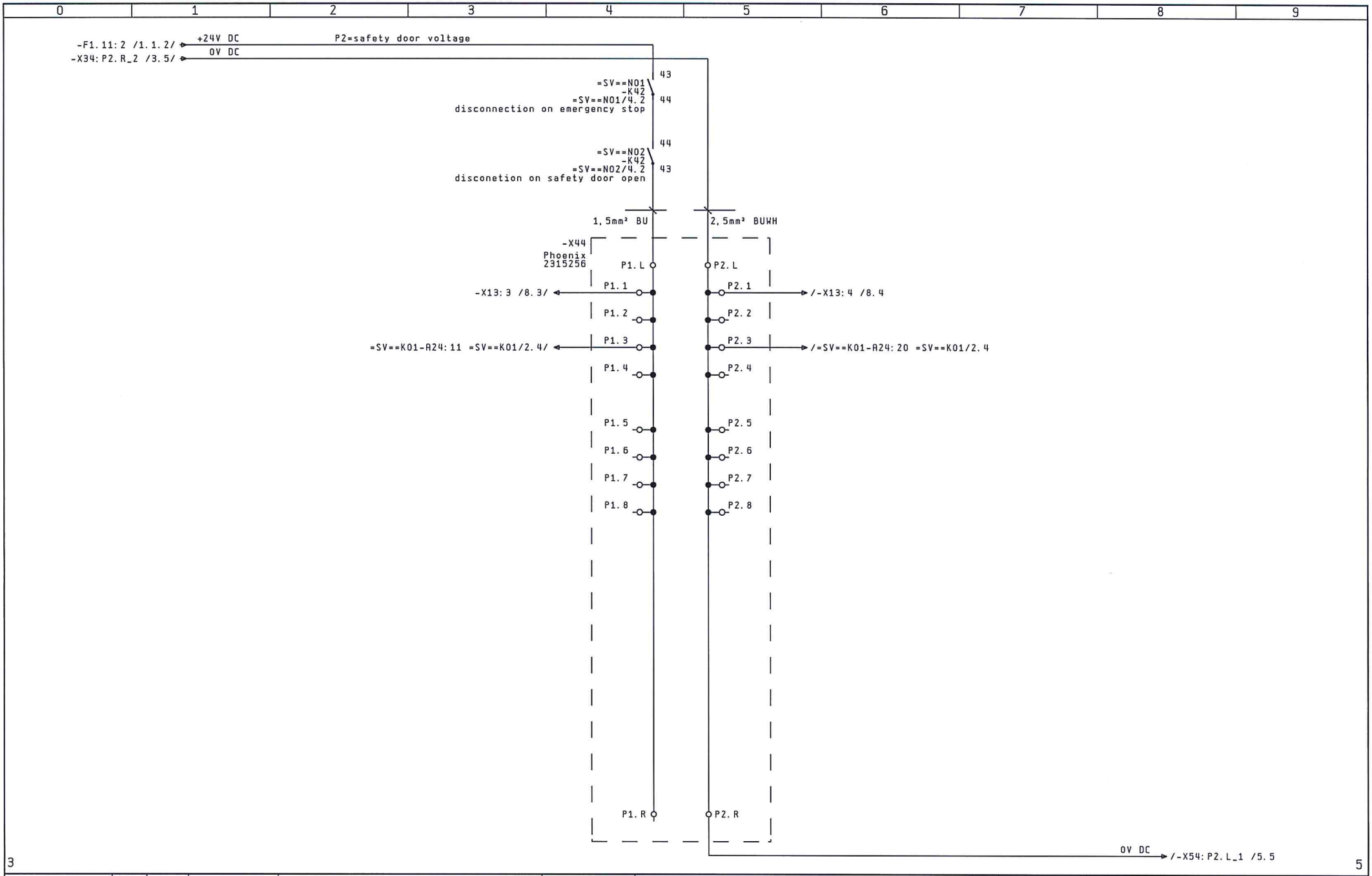
1.1

3

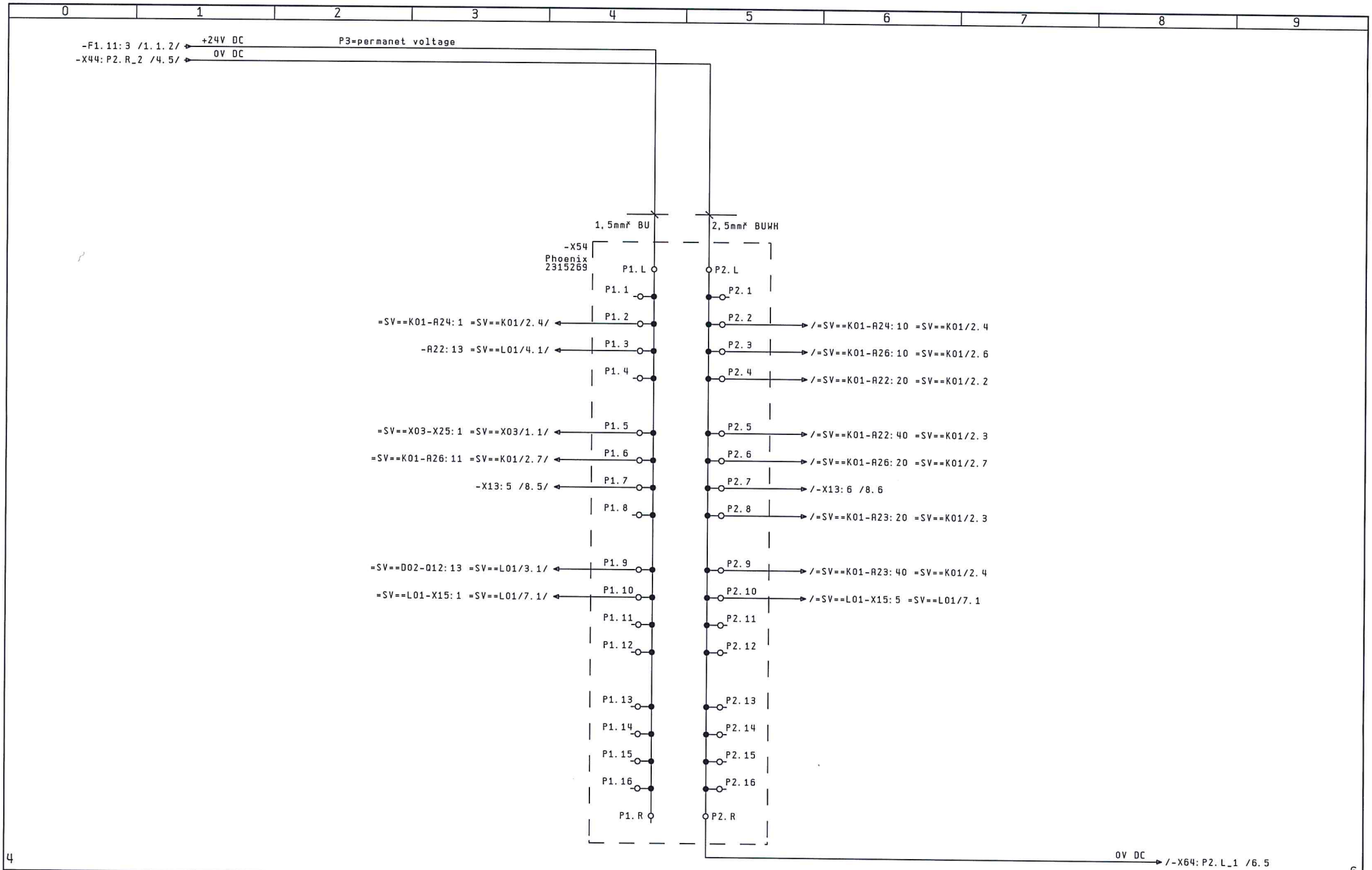
			date	26.08.13	Titan Umreifungstechnik		power supply 24V dc	= SV==G01	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh.	2
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			8 Sh.



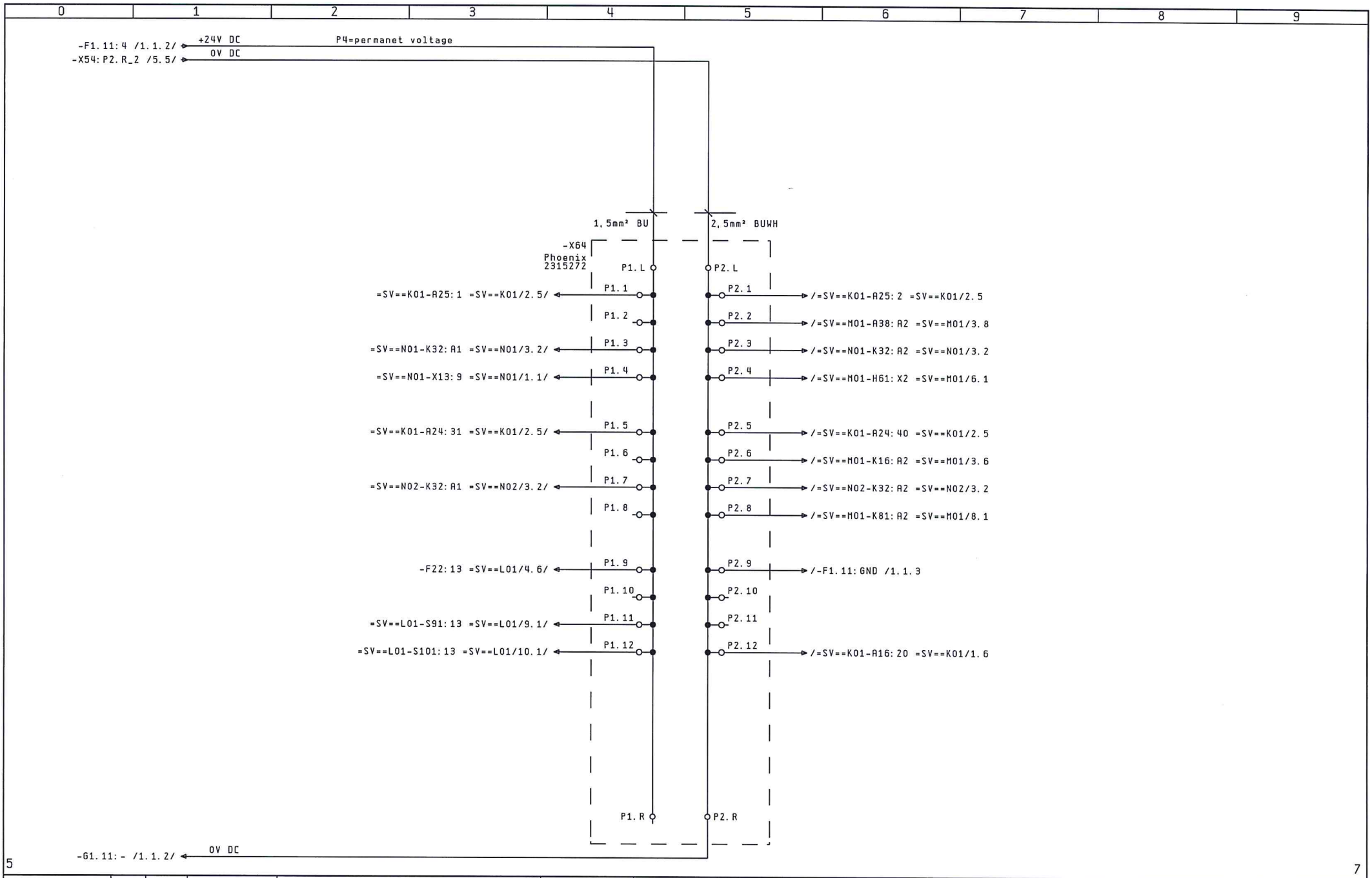
			date	26.08.13	Titan Umreifungstechnik	TITAN	power supply 24V DC via emergency stop	= SV==G01	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh.	3
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			8 Sh.



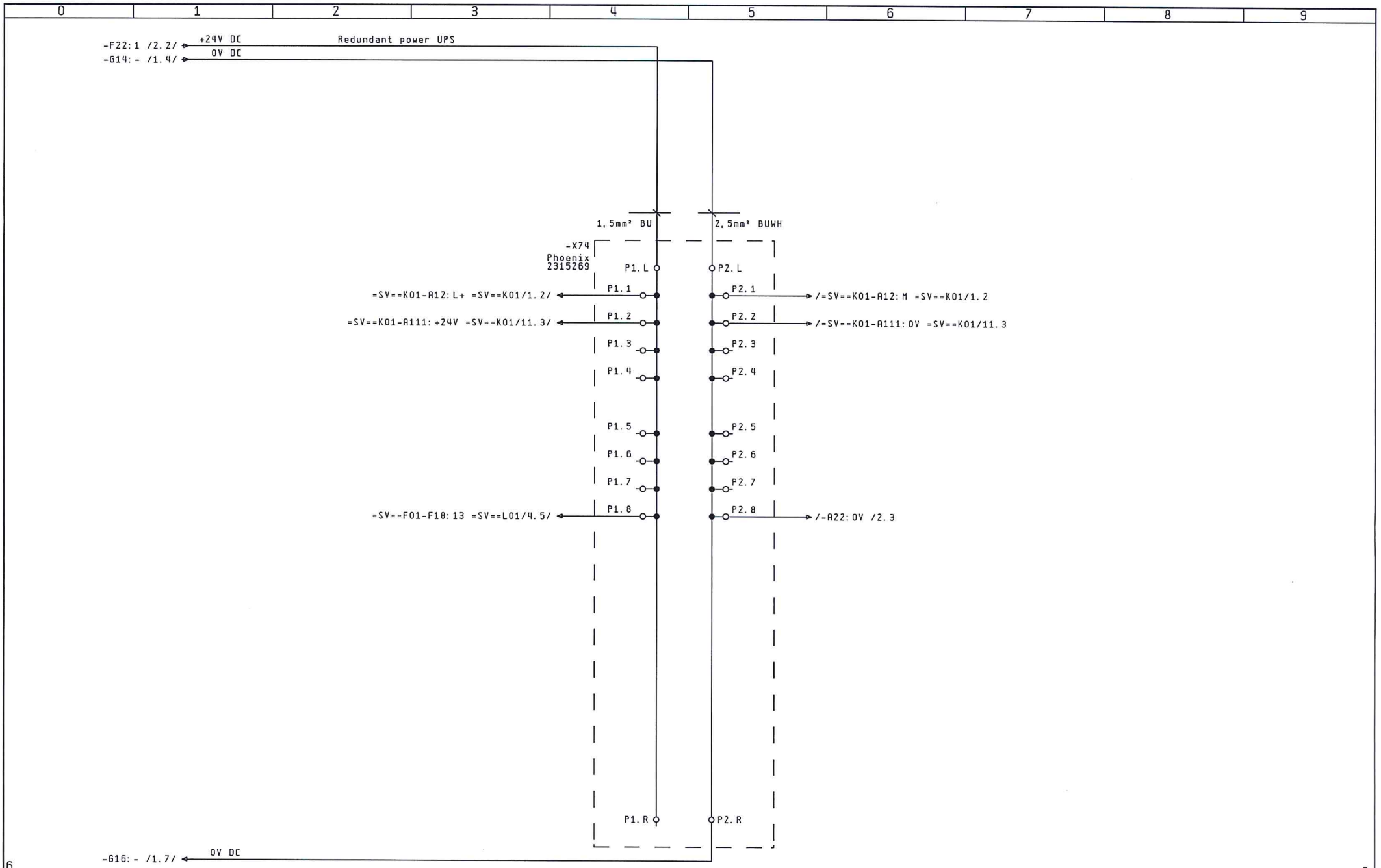
			date	26.08.13	Titan Umreifungstechnik		power supply 24V DC via emergency stop and safety door VS11-S	= SV==G01	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55			T13079		Sh.	4
			check.	26.11.13	58332 Schwelm					8 Sh.	
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			



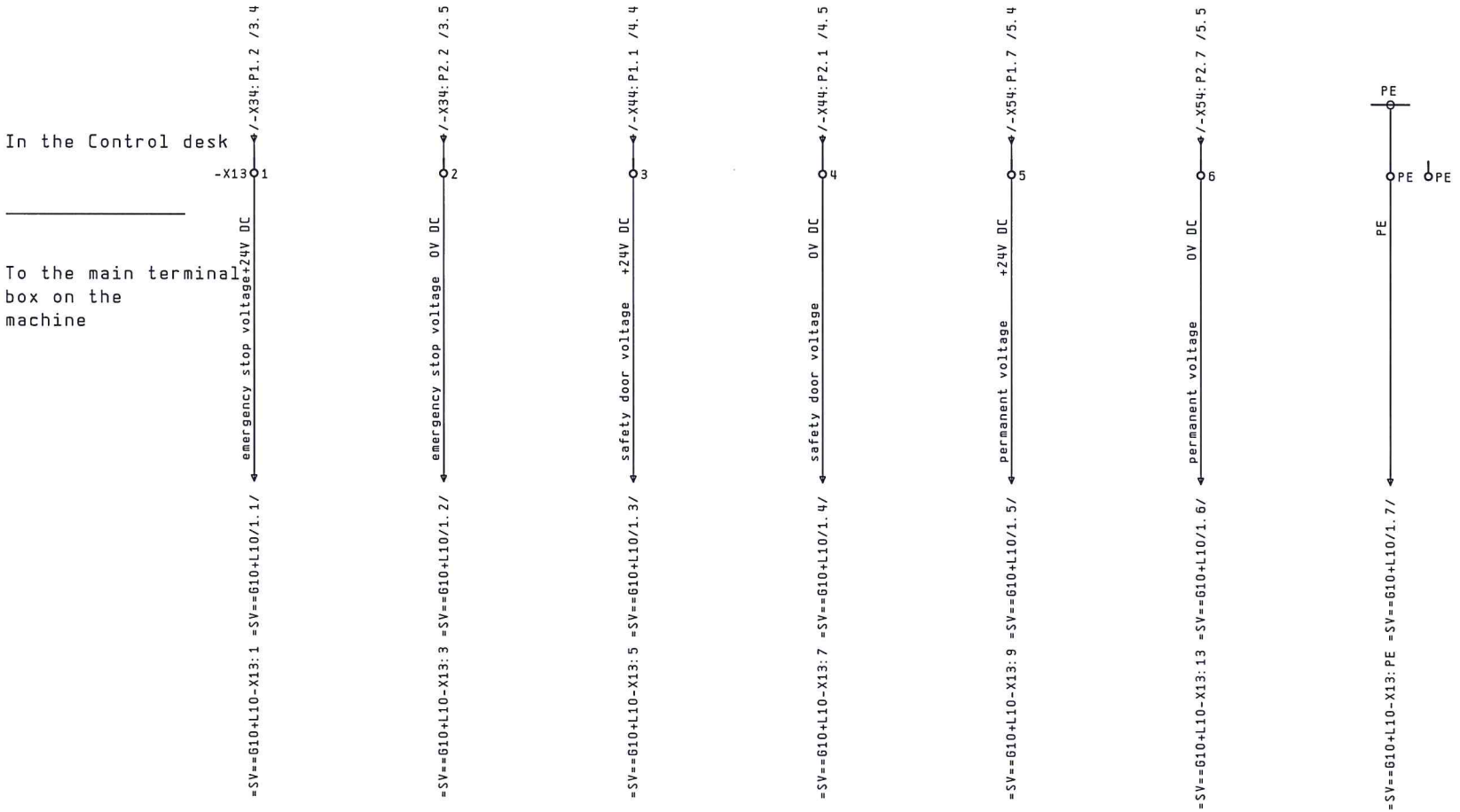
			date	26.08.13	Titan Umreifungstechnik	TITAN	power supply 24V dc	= SV==G01	+ P01	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 5
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		8 Sh.



			date	26.08.13	Titan Umreifungstechnik		power supply 24V dc	= SV==G01	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55	TITAN					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh.	6
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			8 Sh.



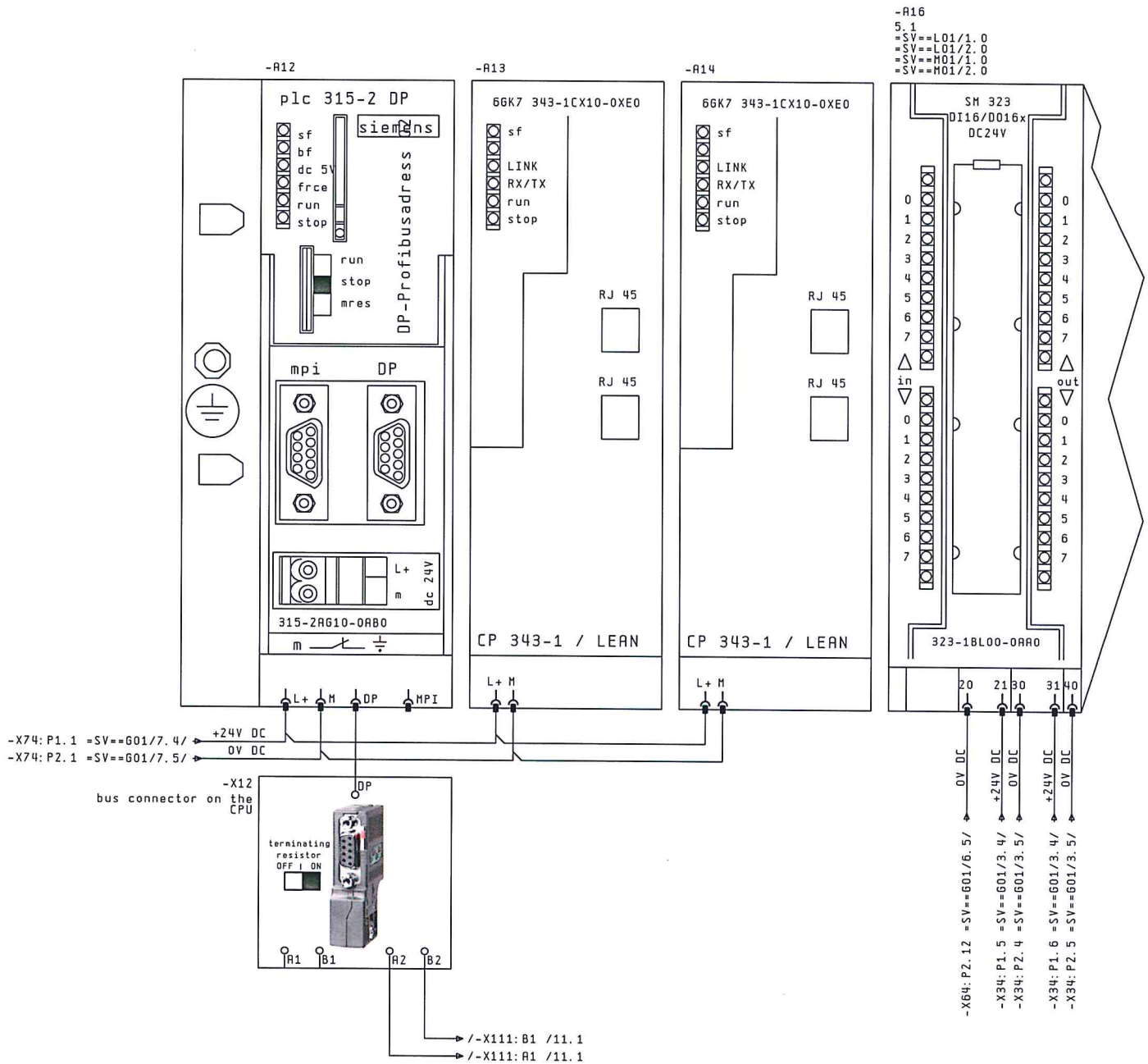
			date	26. 08. 13	Titan Umreifungstechnik	TITAN	power supply 24V dc ups		= SV==G01	+ P01	
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26. 11. 13	58332 Schwelm		VS11-S		T13079		Sh. 7
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			8 Sh.



7

=SV==K01/1

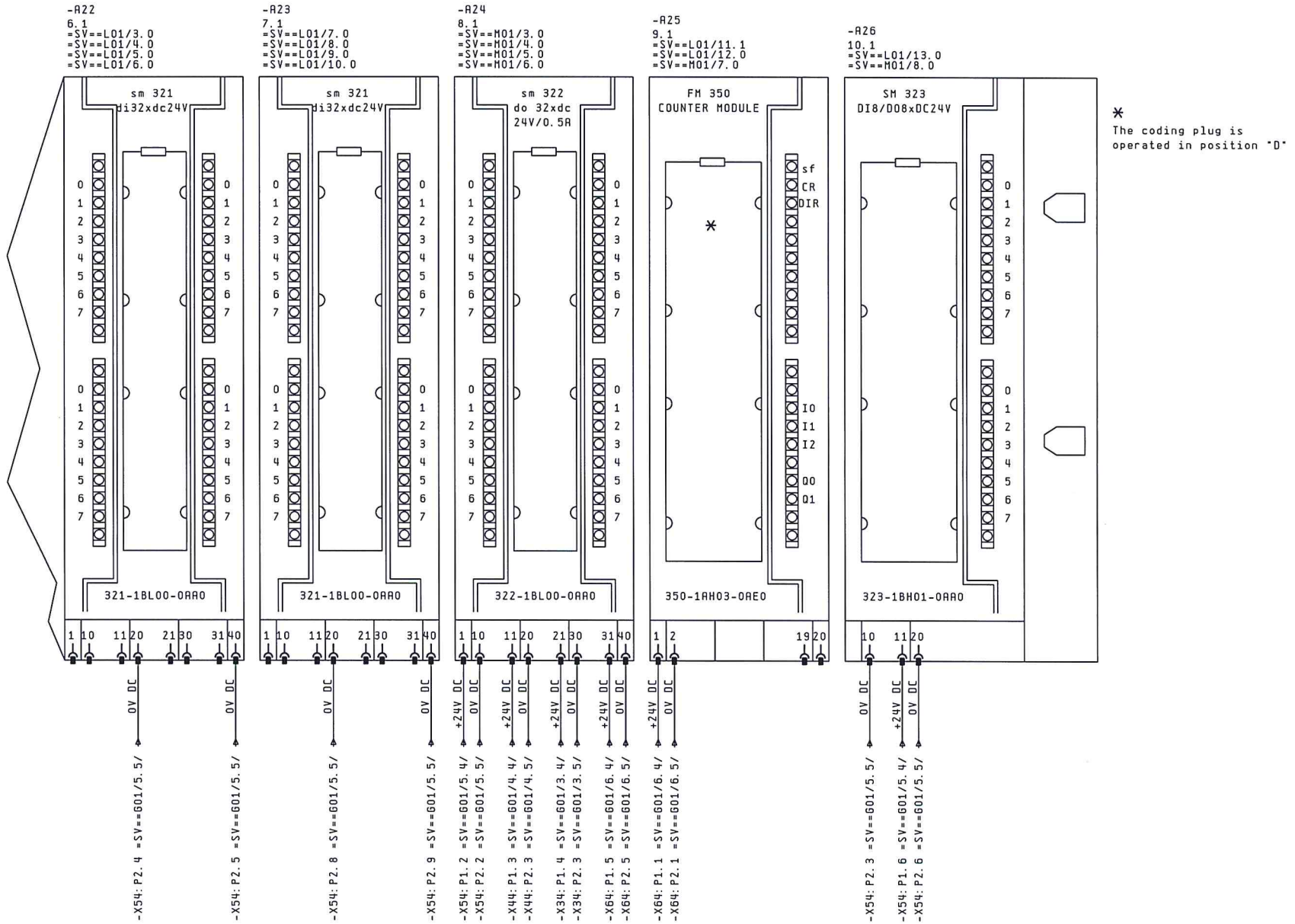
			date	26.08.13	Titan Umreifungstechnik	TITAN	power supply 24V dc / to the main terminal housing	= SV==G01	+ P01
			editor	Lo Grasso	Berliner Straße 51-55		VS11-S	T13079	Sh. 8
			check.	26.11.13	58332 Schwelm				8 Sh.
change	date	name	standa	VDE 0100	origin / replace for / replace through		Möllers		



=SV==G01/8

2

			date	26.08.13	Titan Umreifungstechnik	TITAN	assembly s7-300	= SV==K01	+ P01	
			editor	Lo Grasso	Berliner Straße 51-55		rack	T13079		Sh. 1
			check.	26.11.13	58332 Schwelm		VS11-S			11 Sh.
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		



			date	26.08.13	Titan Umreifungstechnik	TITAN	assembly s7-300	= SV==K01	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55		rack	T13079			Sh. 2
			check.	26.11.13	58332 Schwelm		VS11-S				11 Sh.
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			

0	1	2	3	4	5	6	7	8	9

2

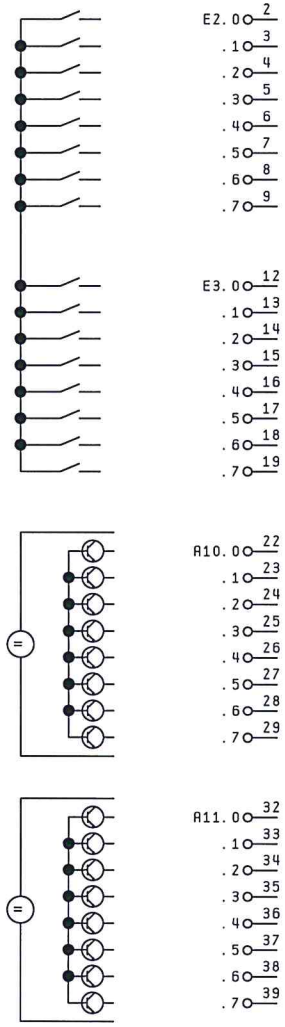
5

			date	26.08.13	Titan Umreifungstechnik Berliner Straße 51-55 58332 Schwelm	TITAN	reserve	= SV==K01	+ P01
			editor	Lo Grasso					
			check.	26.11.13			VS11-S	T13079	Sh. 3
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		11 Sh.

-A16
1.6

siemens

6ES7 313-6CF03-0AB0

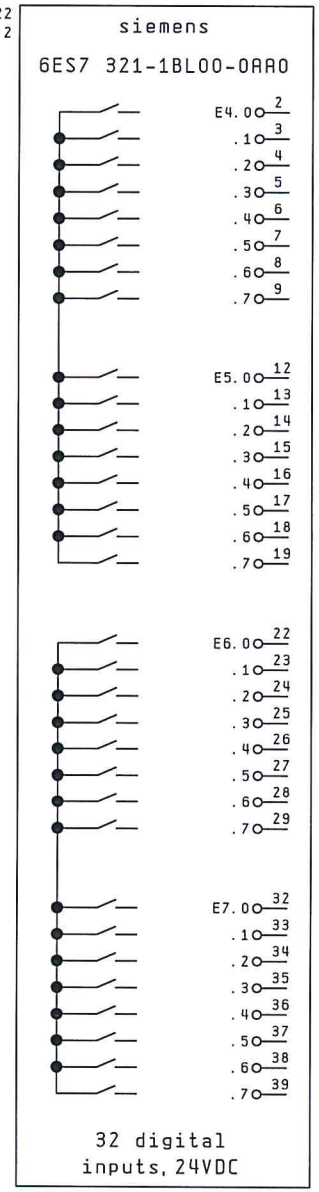


16 digital inputs, 24VDC
16 digital outputs, 24VDC

	=SV==L01/1.1	=SV==L01-X15:11	reserve
	=SV==L01/1.2	=SV==L01-X15:12	reserve
	=SV==L01/1.3	=SV==L01-X15:13	reserve
	=SV==L01/1.4	=SV==L01-X15:14	reserve
	=SV==L01/1.5	=SV==L01-X15:15	reserve
	=SV==L01/1.6	=SV==L01-X15:16	reserve
	=SV==L01/1.7	=SV==L01-X15:17	reserve
	=SV==L01/1.8	=SV==L01-X15:18	reserve
	=SV==L01/2.1	=SV==L01-X15:19	reserve
	=SV==L01/2.2	=SV==L01-X15:20	reserve
	=SV==L01/2.3	=SV==L01-X15:21	reserve
	=SV==L01/2.4	=SV==L01-X15:22	reserve
	=SV==L01/2.5	=SV==L01-X15:23	reserve
	=SV==L01/2.6	=SV==L01-X15:24	reserve
	=SV==L01/2.7	=SV==L01-X15:25	reserve
	=SV==L01/2.8	=SV==L01-X15:26	reserve
permanent voltage	=SV==M01/1.1	=SV==L01+L18-Y11:A1	VS11L air valve middle Y1
	=SV==M01/1.2	=SV==L01+L18-Y12:A1	VS11L air valve quick Y2
	=SV==M01/1.3	=SV==L01+L18-Y13:A1	VS11L transport motor forward Y3
	=SV==M01/1.4	=SV==L01+L18-Y14:A1	VS11L transport motor backward Y4
	=SV==M01/1.5	=SV==L01+L18-Y15:A1	VS11L sealing motor Y5
	=SV==M01/1.6	=SV==L01+L18-Y16:A1	VS11L tensioning motor Y6
	=SV==M01/1.7	=SV==L01+L18-Y17:A1	VS11L transport slide Y7
	=SV==M01/1.8	=SV==L01+L18-Y18:A1	VS11L straightening device Y8
permanent voltage	=SV==M01/2.1	=SV==L01+L18-Y21:A1	VS11L strap stop cylinder Y9
	=SV==M01/2.2	=SV==L01+L18-Y22:A1	VS11L tensioning slide pressed Y16
	=SV==M01/2.3	=SV==L01+L18-Y23:A1	VS11L open flap Y17
	=SV==M01/2.4	=SV==L01+L18-Y24:A1	VS11L close flap Y18
	=SV==M01/2.5	=SV==M01-X16:13	VS11L reserve
	=SV==M01/2.6	=SV==M01-X16:14	VS11L reserve
	=SV==M01/2.7	=SV==M01-X16:15	VS11L reserve
	=SV==M01/2.8	=SV==M01-X16:16	VS11L reserve

			date	26.08.13	Titan Umreifungstechnik	TITAN	Occupancy	=SV==K01	+P01
			editor	Lo Grasso	Berliner Straße 51-55		digital input / output	T13079	Sh. 5
			check.	26.11.13	58332 Schwelm		VS11-S		11 Sh.
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers		

-A22
2.2



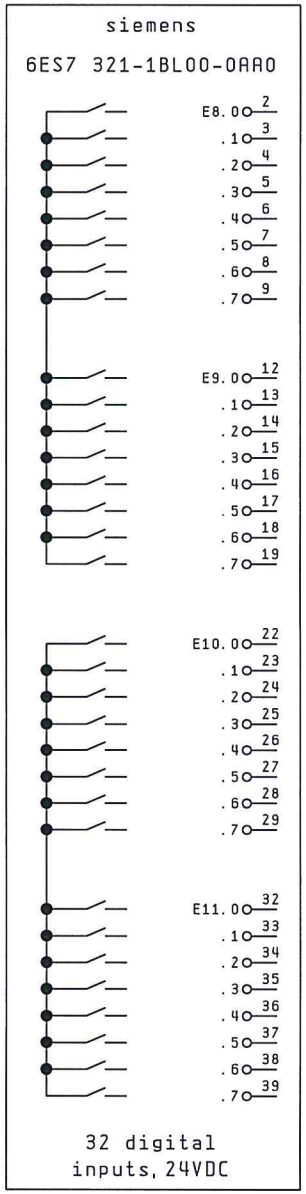
=SV==L01/3.1	=SV==D02-Q12:14	dispenser motor protector
=SV==L01/3.2	=SV==F01-Q11:14	Motor Protection Transformer 480V/230V
=SV==L01/3.3		reserve
=SV==L01/3.4	=SV==F01-F11:14	FI-safetyswitch power supply 230C AC
=SV==L01/3.5	=SV==F01-F15:14	fuse external supply 230V AC
=SV==L01/3.6	=SV==G01-F1.11:14	SITOP select diagnosis module 4 channel
=SV==L01/3.7	=SV==N01-K32:34	Emergency stop module on
=SV==L01/3.8	=SV==N02-K32:24	Protective door module on
=SV==L01/4.1	=SV==G01-X54:P1.3	redundancy module Input 1
=SV==L01/4.2	-A22:E5.0	redundancy module Input 2
=SV==L01/4.3	=SV==G01-F14:14	Redundancy power supply unit 1
=SV==L01/4.4	=SV==G01-F16:14	Redundancy power supply unit 2
=SV==L01/4.5	=SV==F01-F18:14	Power supply unit 20A
=SV==L01/4.6	=SV==G01-F22:14	SITOP select diagnosis module 2 channel
=SV==L01/4.7	=SV==N01-S11:32	emergency stop in the control desk
=SV==L01/4.8	=SV==N01-S11:31	reverse emergency stop
=SV==L01/5.1	=SV==L01+L10-S51:14	strapping head home position
=SV==L01/5.2	=SV==L01+L10-S51:22	strapping head home position
=SV==L01/5.3	=SV==L01+L10-B53:4	Strapping unit to the package
=SV==L01/5.4	=SV==L01+L10-X15:44	reserve
=SV==L01/5.5	=SV==L01+L10-S55:14	Retractable Rear Channel home position
=SV==L01/5.6	=SV==L01+L10-S55:22	Retractable Rear Channel home position
=SV==L01/5.7	=SV==L01+L10-B57:4	Retractable channel closed
=SV==L01/5.8	=SV==L01+L10-X15:48	reserve
=SV==L01/6.1	=SV==L01+L10-B61:4	Locking pin strapping head in strapping position
=SV==L01/6.2	=SV==L01+L10-X15:50	reserve
=SV==L01/6.3	=SV==L01+L10-X15:51	reserve
=SV==L01/6.4	=SV==L01+L10-S64:3	Main stop valve pressure switch air pressure = 0 bar
=SV==L01/6.5	=SV==L01+L10-S65:2	VS11 unit pressure switch air pressure <4 bar
=SV==L01/6.6	=SV==L01+L10-X15:54	reserve
=SV==L01/6.7	=SV==L01+L10-X15:55	reserve
=SV==L01/6.8	=SV==L01+L10-X15:56	reserve

5

7

			date	26.08.13	Titan Umreifungstechnik	TITAN	allocation	=SV==K01	+P01
			editor	Lo Grasso	Berliner Straße 51-55		digital intput group	T13079	Sh. 6
			check.	26.11.13	58332 Schwelm		VS11-S		11 Sh.
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		

-A23
2.3



=SV==L01/7.1	=SV==L01+L18-B71:4	VS11L strap stop switch B1
=SV==L01/7.2		reserve
=SV==L01/7.3	=SV==L01+L18-B73:4	VS11L O-position B3
=SV==L01/7.4	=SV==L01+L18-B74:4	VS11L clamp position B4
=SV==L01/7.5	=SV==L01+L18-B75:4	VS11L safety switch flap open B6
=SV==L01/7.6	=SV==L01+L10-B76:4	VS11L head before package B7
=SV==L01/7.7	=SV==L01+L10-B77:4	VS11L head on package B8
=SV==L01/7.8	=SV==L01+L18-B78:14	VS11L service - switch strap insertion B9
=SV==L01/8.1	=SV==L01+L18-S81:14	VS11L service - switch sealing B10
=SV==L01/8.2	=SV==L01+L18-XK1:10	VS11L reserve
=SV==L01/8.3	=SV==L01+L18-XK1:11	VS11L reserve
=SV==L01/8.4		VS11L reserve
=SV==L01/8.5		VS11L reserve
=SV==L01/8.6		reserve
=SV==L01/8.7		reserve
=SV==L01/8.8		reserve
=SV==L01/9.1	=SV==L01-S91:14	control on
=SV==L01/9.2	=SV==L01-S92:22	control off
=SV==L01/9.3	=SV==L01-S93:14	manual mode
=SV==L01/9.4	=SV==L01-S94:14	automatic
=SV==L01/9.5	=SV==L01-S95:14	cycle start
=SV==L01/9.6	=SV==L01-S96:22	cycle stop
=SV==L01/9.7	=SV==L01-S97:14	fault acknowledge
=SV==L01/9.8	=SV==L01-S98:14	drive to home position
=SV==L01/10.1	=SV==L01-S101:14	release transport
=SV==L01/10.2	=SV==L01+L10-X15:68	reserve
=SV==L01/10.3	=SV==L01+L01-B103:4	strap accumulator full
=SV==L01/10.4	=SV==L01+L01-B104:4	strap accumulator empty
=SV==L01/10.5	=SV==L01+L01-B105:4	strap accumulator end
=SV==L01/10.6	=SV==L01+L01-S106:14	fill strap accumulator
=SV==L01/10.7	=SV==L01+L01-X15:13	strap accumulator reserve
=SV==L01/10.8	=SV==L01+L01-B108:4	strap accumulator strap low

6

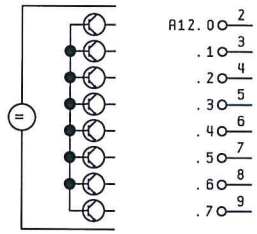
8

			date	26.08.13	Titan Umreifungstechnik		TITAN	allocation	= SV==K01	+ P01			
			editor	Lo Grasso	Berliner Straße 51-55			digital intput group					
			check.	26.11.13	58332 Schwelm			VS11-S	T13079			Sh.	7
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers					11 Sh.

-A24
2.4

siemens

6ES7 322-1BL00-0AA0



permanent voltage	A12.0	2	=SV==M01/3.1	reserve
	.1	3	=SV==M01/3.2	reserve
	.2	4	=SV==M01/3.3	reserve
	.3	5	=SV==M01/3.4	reserve
	.4	6	=SV==M01/3.5	reserve
	.5	7	=SV==M01/3.6	=SV==M01-K16:A1 safety door open
	.6	8	=SV==M01/3.7	reserve
	.7	9	=SV==M01/3.8	=SV==M01-A38:A1 strapping counter
safety door voltage	A13.0	12	=SV==M01/4.1	=SV==M01+L10-Y41:A1 compressed air main valve
	.1	13	=SV==M01/4.2	=SV==M01+L10-Y42:A1 strapping head ago
	.2	14	=SV==M01/4.3	=SV==M01+L10-Y43:A1 Strapping unit back
	.3	15	=SV==M01/4.4	=SV==M01+L10-Y44:A1 Retractable channel before
	.4	16	=SV==M01/4.5	=SV==M01+L10-Y45:A1 Retractable channel back
	.5	17	=SV==M01/4.6	=SV==M01+L10-X16:29 reserve
	.6	18	=SV==M01/4.7	=SV==M01+L10-Y47:A1 VS11 strapping head
	.7	19	=SV==M01/4.8	=SV==M01+L10-Y48:A1 strap clamp open/close
emergency stop voltage	A14.0	22	=SV==M01/5.1	=SV==M01-K51:A1 dispenser contactor
	.1	23	=SV==M01/5.2	=SV==M01-X16:25 dispenser contactor
	.2	24	=SV==M01/5.3	=SV==M01-X16:26 reserve
	.3	25	=SV==M01/5.4	=SV==M01-X16:27 reserve
	.4	26	=SV==M01/5.5	=SV==M01-X16:28 reserve
	.5	27	=SV==M01/5.6	=SV==M01-X16:29 reserve
	.6	28	=SV==M01/5.7	=SV==M01+L10-X16:32 reserve
	.7	29	=SV==M01/5.8	=SV==M01+L10-X16:33 reserve
permanent voltage	A15.0	32	=SV==M01/6.1	=SV==M01-H61:X1 control on
	.1	33	=SV==M01/6.2	=SV==M01-H62:X1 manual mode
	.2	34	=SV==M01/6.3	=SV==M01-H63:X1 automatic
	.3	35	=SV==M01/6.4	=SV==M01-H64:X1 cycle start
	.4	36	=SV==M01/6.5	=SV==M01-H65:X1 fault acknowledge
	.5	37	=SV==M01/6.6	=SV==M01-H66:X1 drive to home position
	.6	38	=SV==M01/6.7	=SV==M01-H67:X1 release transport
	.7	39	=SV==M01/6.8	=SV==M01-H68:X1 emergency stop acknowledge

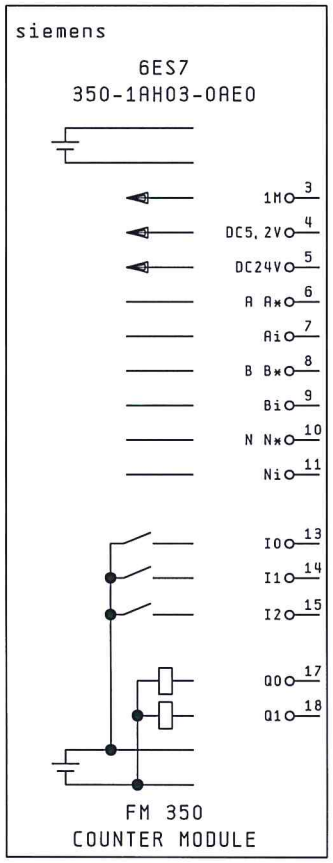
32 digital outputs, 24VDC

7

9

			date	26.08.13	Titan Umreifungstechnik	TITAN	allocation	= SV==K01	+ P01
			editor	Lo Grasso	Berliner Straße 51-55		digital output group	T13079	Sh. 8
			check.	26.11.13	58332 Schwelm		VS11-S		11 Sh.
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers	

-A25
2.5



=SV==L01/11.2	=SV==L01+L18-XS1:C3	Encoder ground
=SV==L01/11.3		5,2V power supply
=SV==L01/11.4	=SV==L01+L18-XS1:C2	24V power supply
=SV==L01/11.5		Signal A
=SV==L01/11.5		Signal Ai
=SV==L01/11.6		Signal B
=SV==L01/11.7		Signal Bi
=SV==L01/11.8		Signal N
=SV==L01/11.9		Signal Ni
=SV==L01/12.2	=SV==L01+L18-B72:4	VS11L counter switch BZ
=SV==L01/12.3		reserve
=SV==L01/12.4		reserve
=SV==M01/7.3		reserve
=SV==M01/7.4		reserve

8

10

			date	26.08.13	Titan Umreifungstechnik	TITAN	counter module	= SV==K01	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 9
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers		11 Sh.

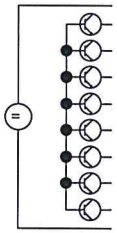
-A26
2.6

siemens

6ES7 323-1BH01-0AA0



E12.0	2	=SV==L01/13.1	:14	Signal exchange transport of boxes ready
.1	3	=SV==L01/13.2	:14	Signal exchange box position 1
.2	4	=SV==L01/13.3	:14	Signal exchange box position 2
.3	5	=SV==L01/13.4	:14	Signal exchange start strapping machine
.4	6	=SV==L01/13.5	:14	signal exchange door Is opened
.5	7	=SV==L01/13.6	:14	signal exchange door Is closed
.6	8	=SV==L01/13.7	:14	signal exchange reserve
.7	9	=SV==L01/13.8	:14	signal exchange reserve



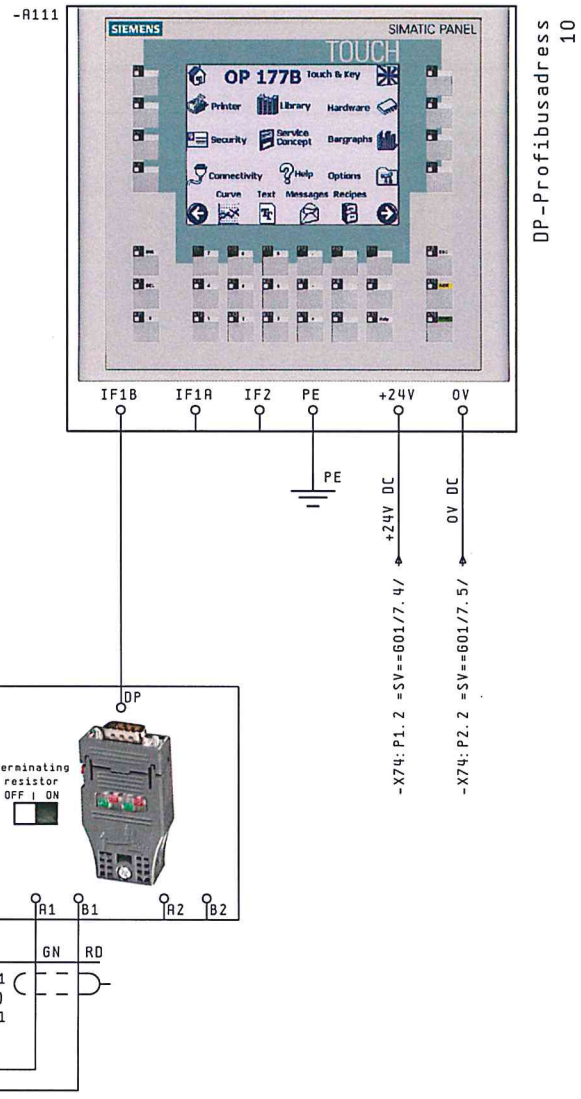
A16.0	12	=SV==M01/8.1	=SV==M01-K81:A1	Signal exchange strapping machine Ready
.1	13	=SV==M01/8.2	=SV==M01-K82:A1	Signal exchange strapping machine disorder
.2	14	=SV==M01/8.3	=SV==M01-K83:A1	Signal exchange strapping machine takeover ready
.3	15	=SV==M01/8.4	=SV==M01-K84:A1	Signal exchange strapping machine takeover ready
.4	16	=SV==M01/8.5	=SV==M01-K85:A1	Signal exchange strapping machine empty message Magazine
.5	17	=SV==M01/8.6	=SV==M01-K86:A1	signal exchange strapping machine release doors Open
.6	18	=SV==M01/8.7	=SV==M01-K87:A1	signal exchange strapping machine reserve
.7	19	=SV==M01/8.8	=SV==M01-K88:A1	signal exchange strapping machine reserve

8 digital inputs, 24VDC
8 digital outputs, 24VDC

9

11

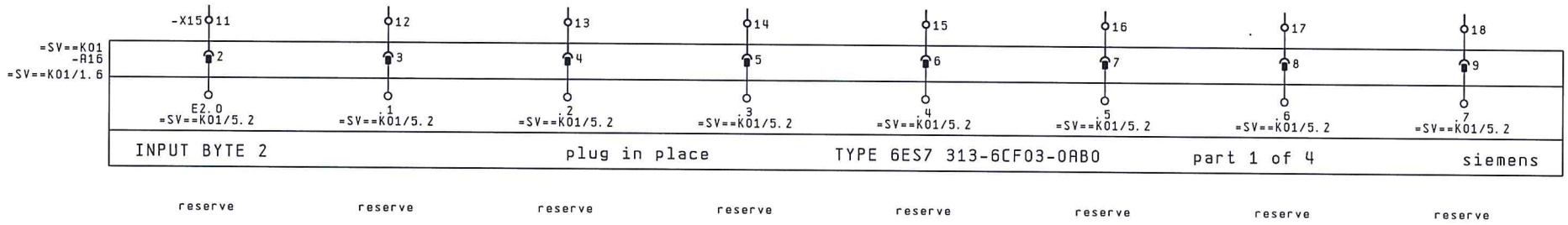
			date	26.08.13	Titan Umreifungstechnik	TITAN	Occupancy	= SV==K01	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55		digital input / digital output				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh.	10
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			11 Sh.



10

=SV==L01/1

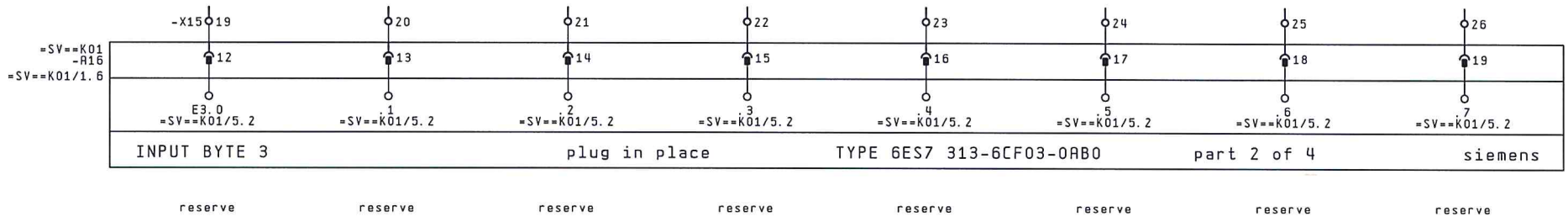
			date	26.08.13	Titan Umreifungstechnik			Operator Panel 177B	= SV==K01	+ P01	
			editor	Lo Grasso	Berliner Straße 51-55		TITAN				
			check.	26.11.13	58332 Schwelm			VS11-S	T13079		Sh. 11
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			11 Sh.



=SV==K01/11

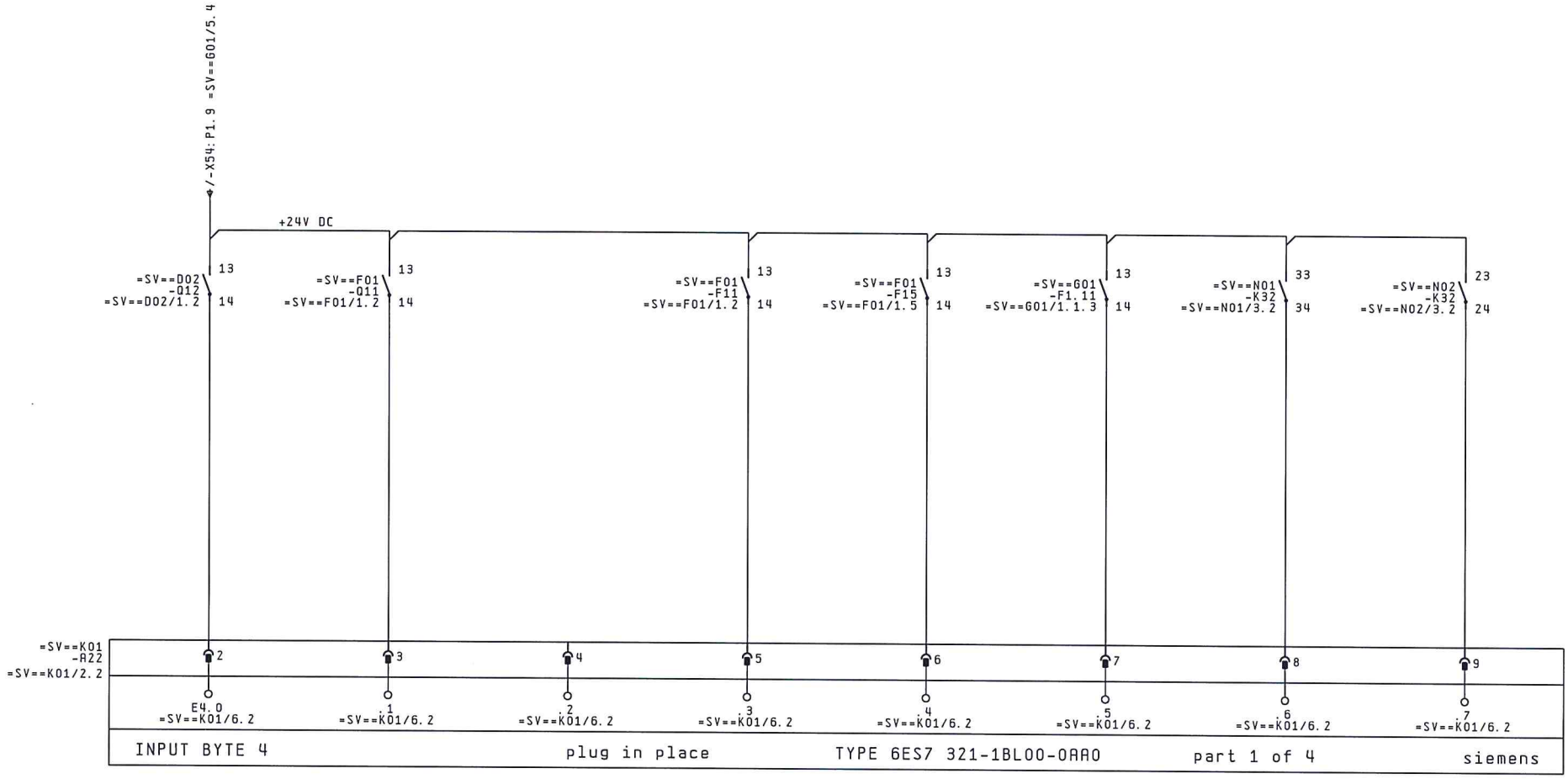
2

			date	26.08.13	Titan Umreifungstechnik Berliner Straße 51-55 58332 Schwelm	TITAN	plc input byte 2 VS11-S	= SV==L01	+ P01
			editor	Lo Grasso				T13079	Sh. 1
			check.	26.11.13					13 Sh.
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers	

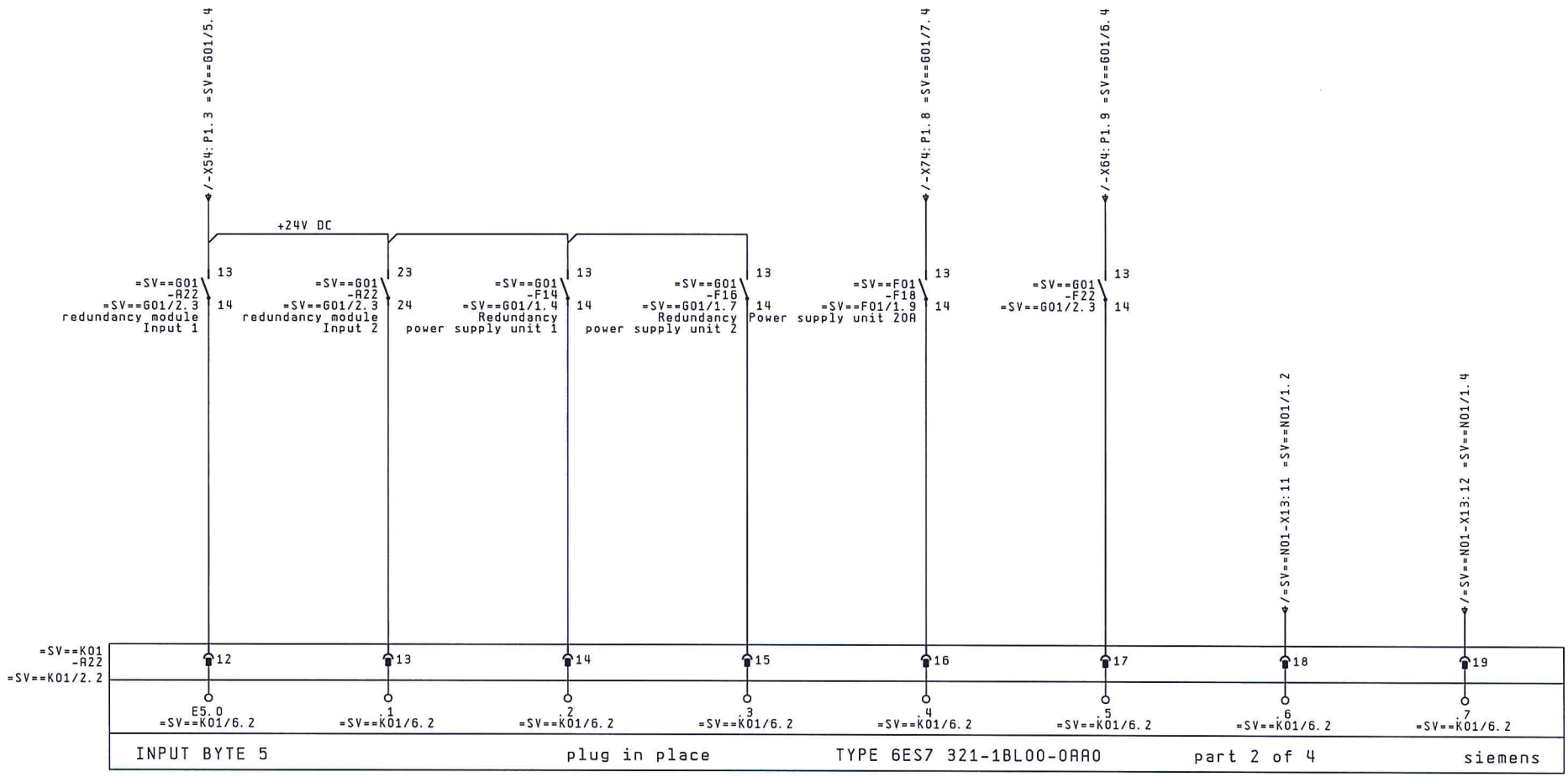


1 3

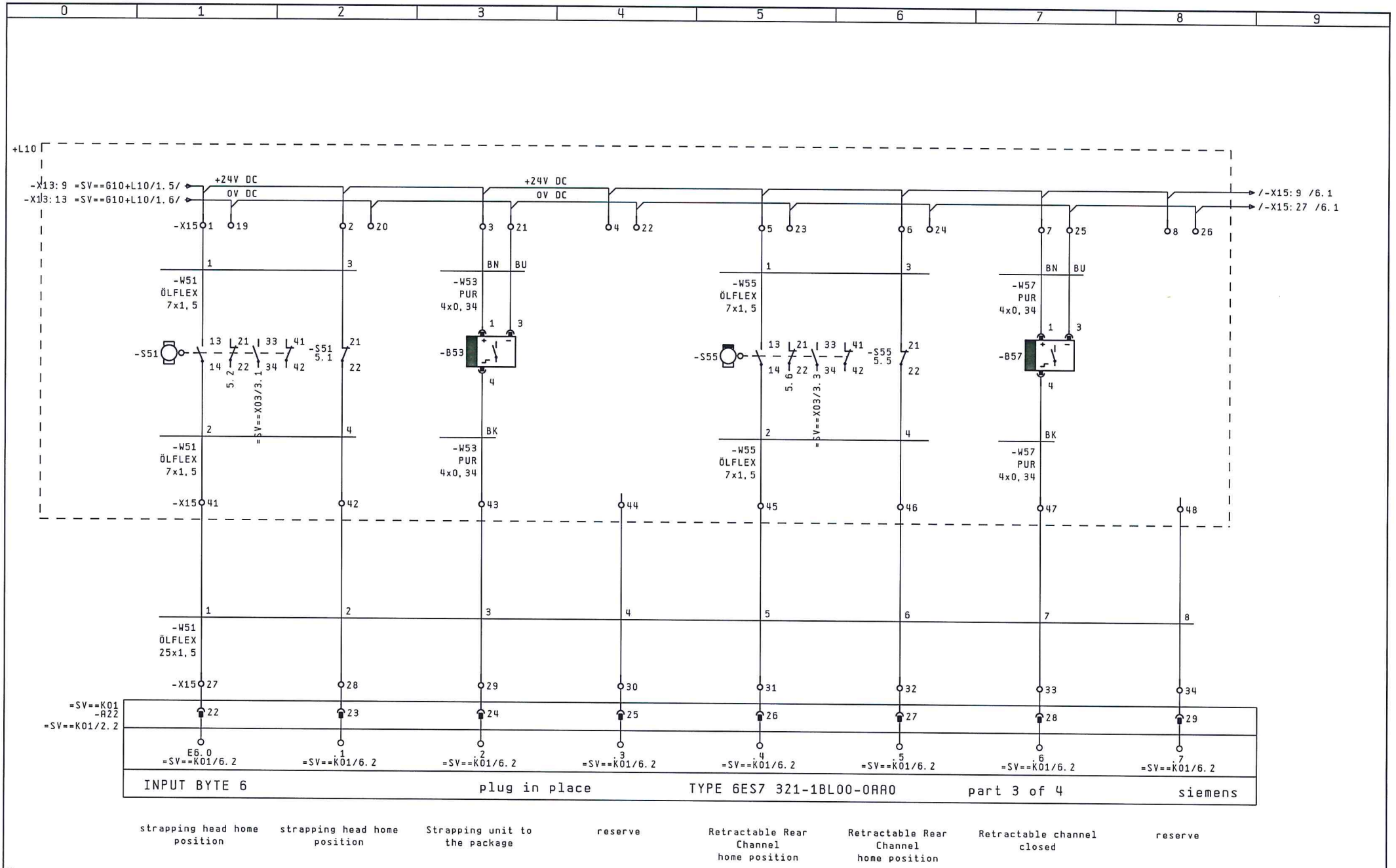
			date	26.08.13	Titan Umreifungstechnik Berliner Straße 51-55 58332 Schwelm	TITAN	plc input byte 3 VS11-S	= SV==L01	+ P01
			editor	Lo Grasso				T13079	Sh. 2
			check.	26.11.13					13 Sh.
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers	



			date	26.08.13	Titan Umreifungstechnik	TITAN	plc input byte 4	= SV==L01	+ P01
			editor	Lo Grasso	Berliner Straße 51-55			T13079	Sh. 3
			check.	26.11.13	58332 Schwelm		VS11-S		13 Sh.
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers		

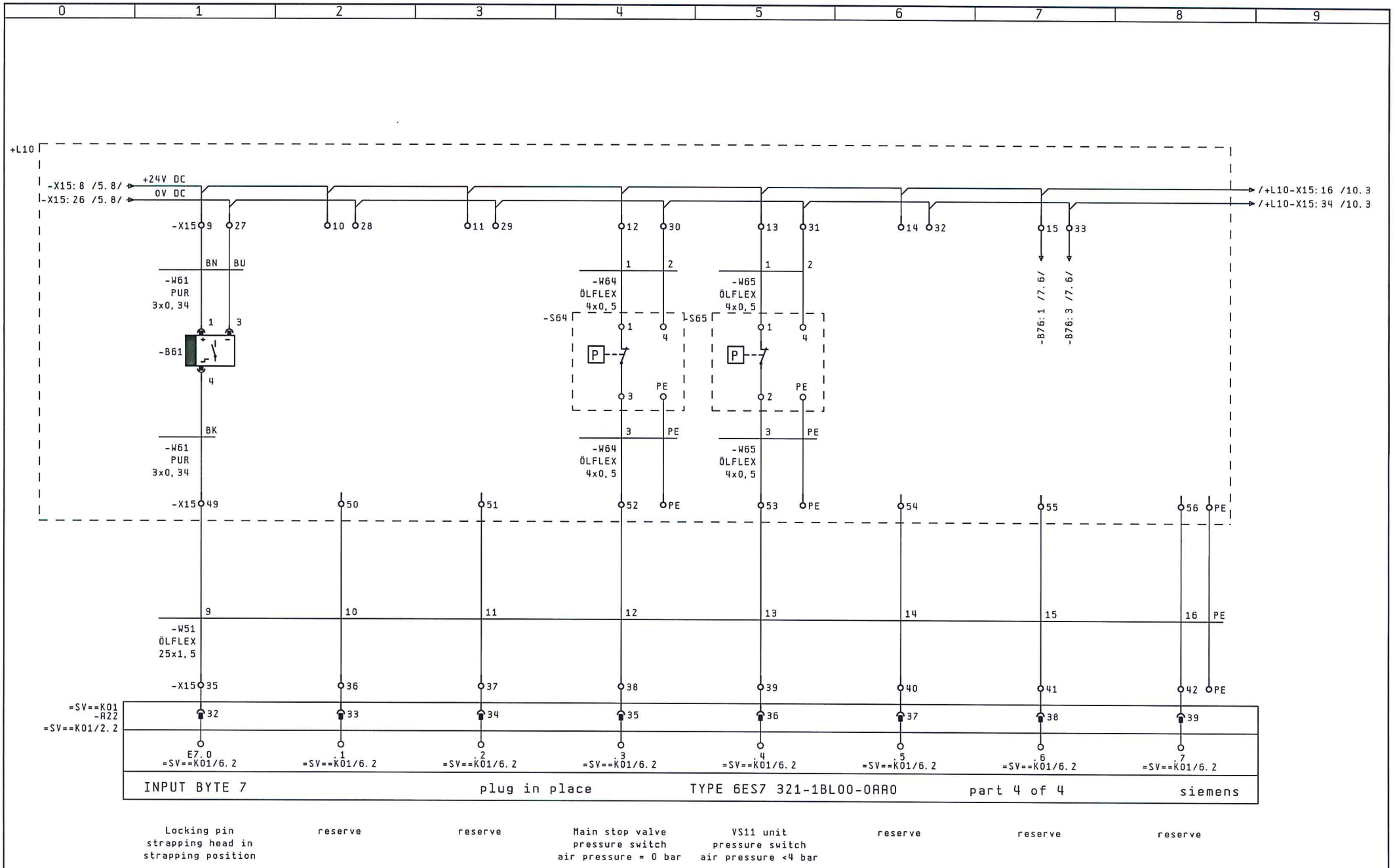


			date	26.08.13	Titan Umreifungstechnik		plc input byte 5	= SV==L01	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55	TITAN					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh.	4
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			13 Sh.



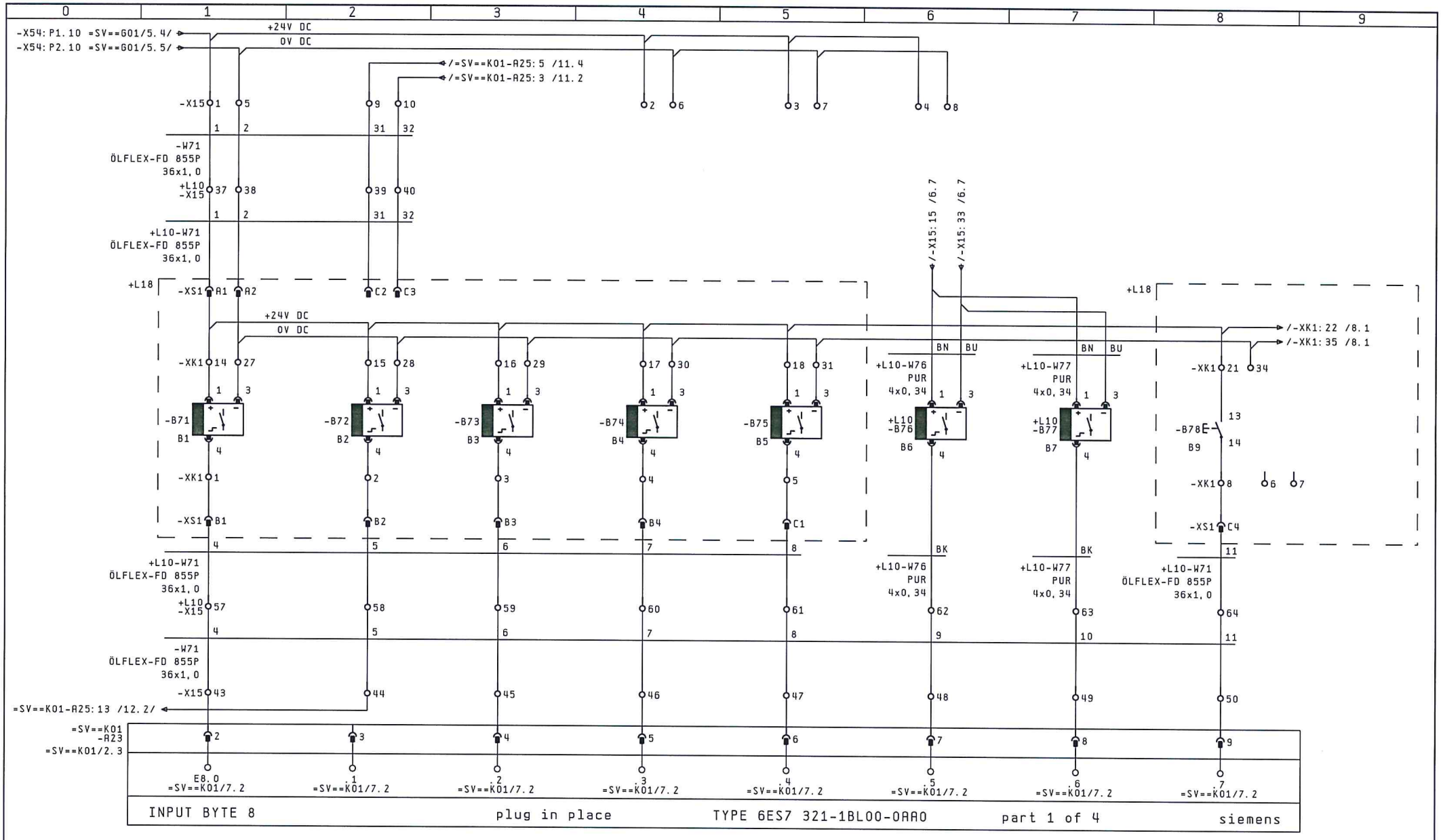
4 6

			date	26.08.13	Titan Umreifungstechnik	TITAN	plc input byte 6	=SV==L01	+P01	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 5
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		13 Sh.

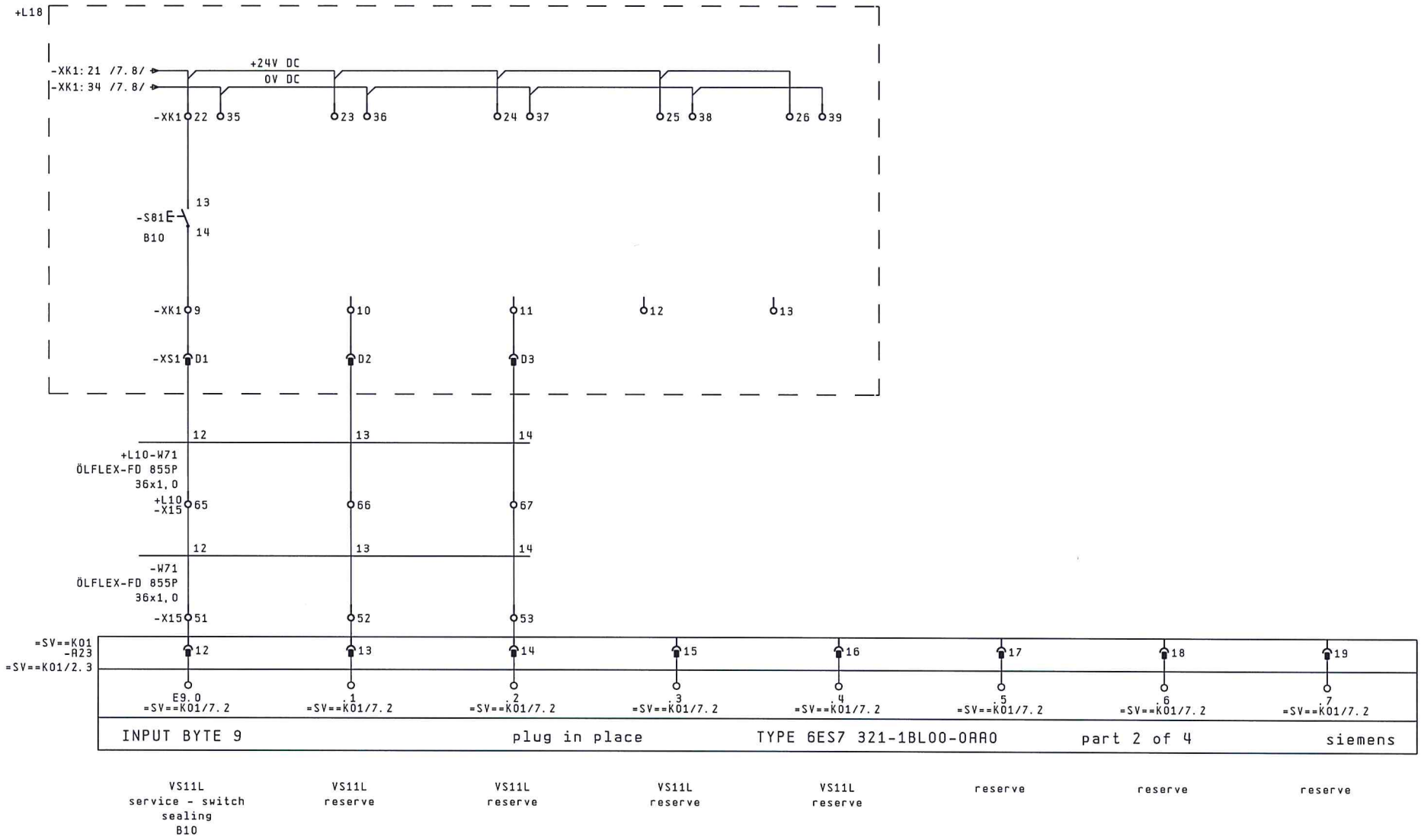


5 7

			date	26.08.13	Titan Umreifungstechnik	TITAN	plc input byte 7	= SV==L01	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 6	
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			13 Sh.

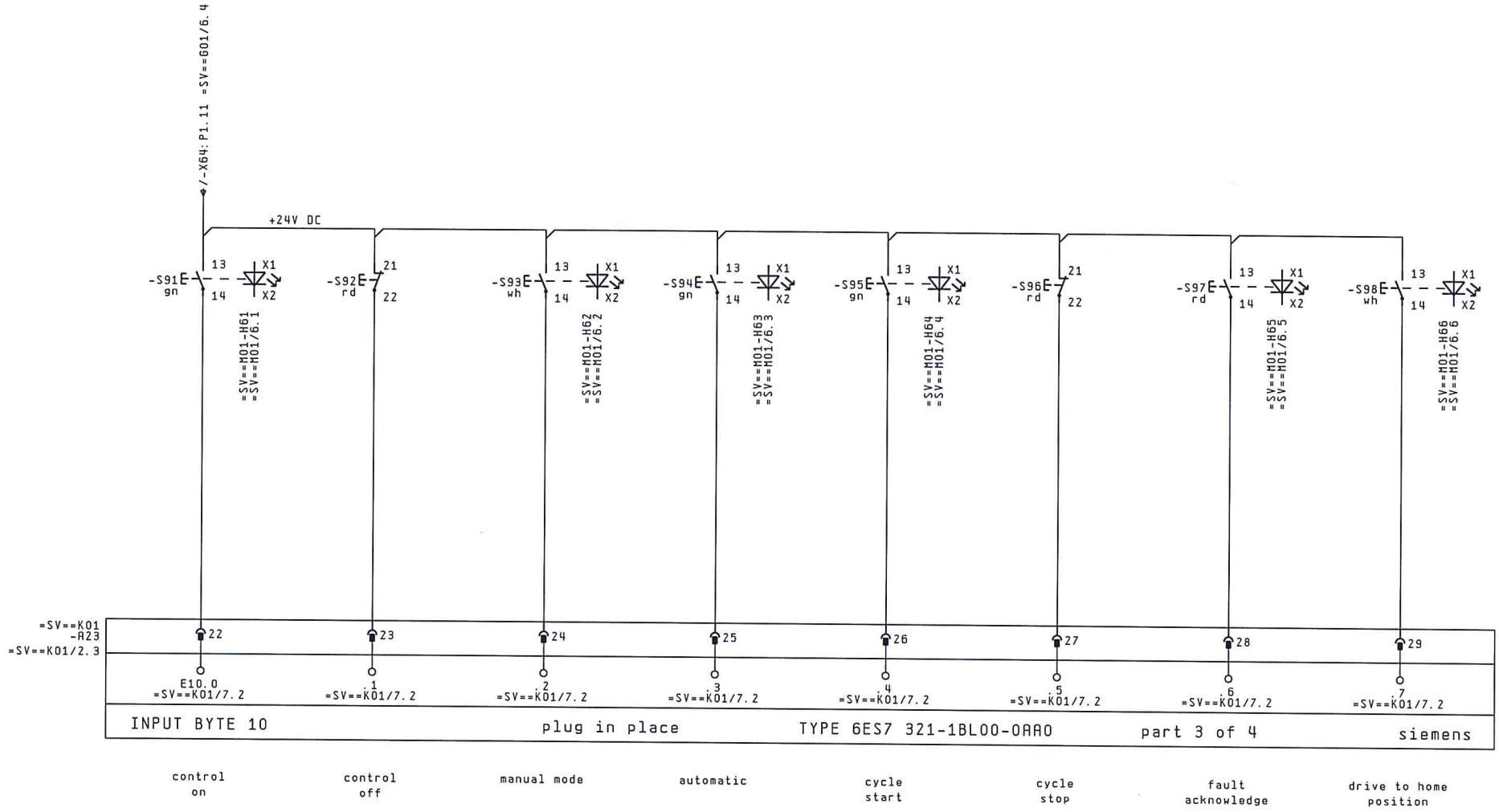


			date	26.08.13	Titan Umreifungstechnik	TITAN	plc input byte 8	= SV==L01	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 7
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers		13 Sh.



7 9

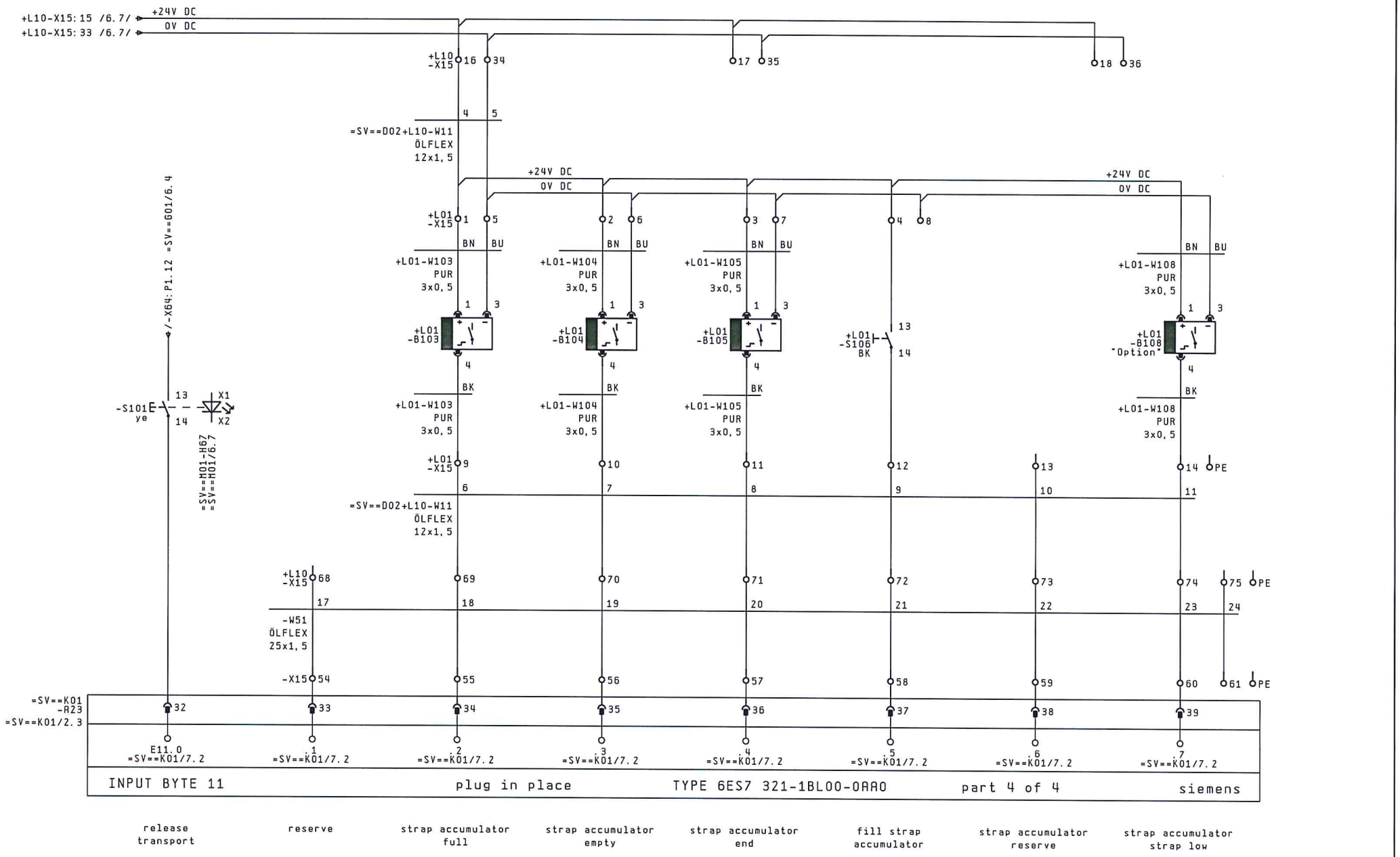
			date	26.08.13	Titan Umreifungstechnik	TITANO	plc input byte 9	= SV==L01	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh.	8
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			13 Sh.



8

10

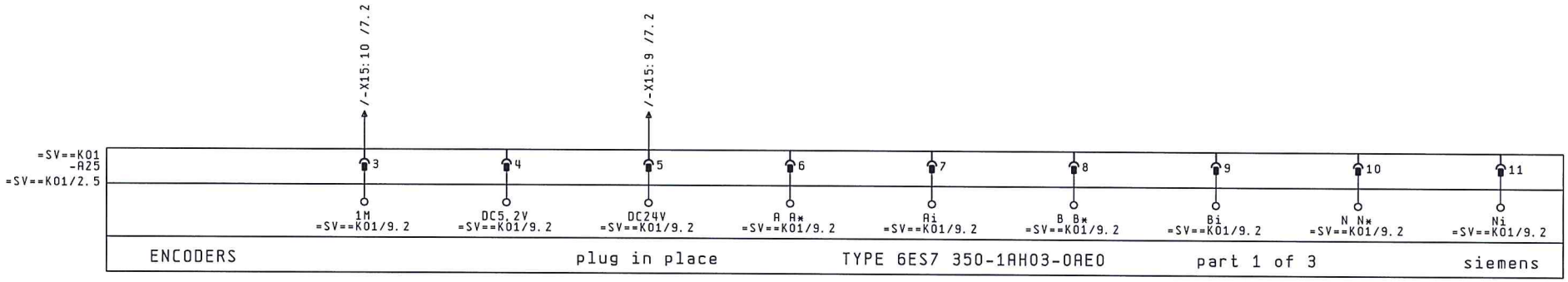
			date	26.08.13	Titan Umreifungstechnik	TITAN	plc input byte 10	= SV==L01	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 9
change	date	name	standa	VDE 0100	origin / replace for / replace through		Möllers		13 Sh.



9

11

			date	26.08.13	Titan Umreifungstechnik	TITAN	plc input byte 11	= SV==L01	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 10
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		13 Sh.



FUNCTION	1ME	DC5,2V	DC24V	aa*	A inverse	BB*	B inverse	NN*	N inverse
5V encoder RS 422 symmetric	Encoder ground	5,2V power supply	24V power supply	Signal A	Signal Ai	Signal B	Signal Bi	Signal N	Signal Ni
24V encoder asymmetric				Encoder Signal A*	---	Encoder Signal B*	---	Encoder Signal N*	---
24V pulse generator						direction signal		---	
24V initiator						---			

change	date	name	standa		origin	replace for	replace through
			date	26.08.13	Titan Umreifungstechnik		
			editor	Lo Grasso	Berliner Straße 51-55		
			check.	26.11.13	58332 Schwelm		
			VDE 0100				

TITAN

plc counter module

VS11-S

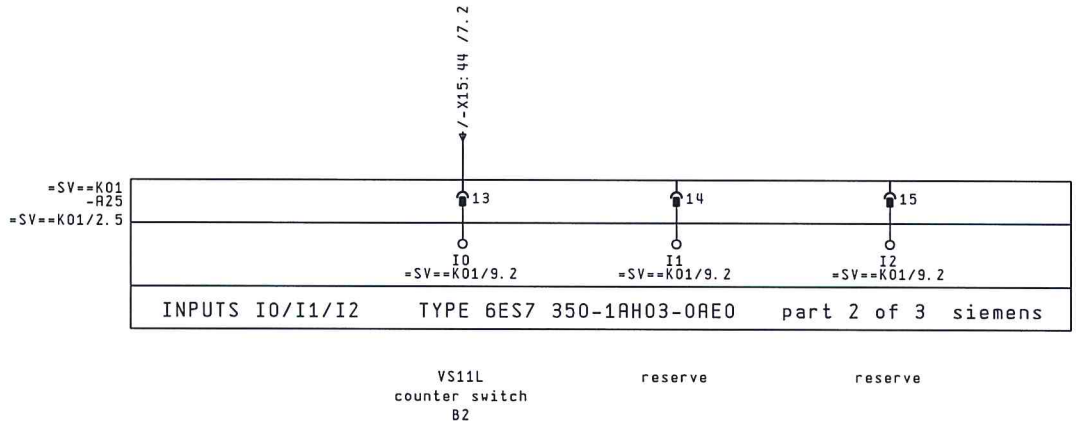
Möllers

= SV==L01 | + P01

T13079

Sh. 11

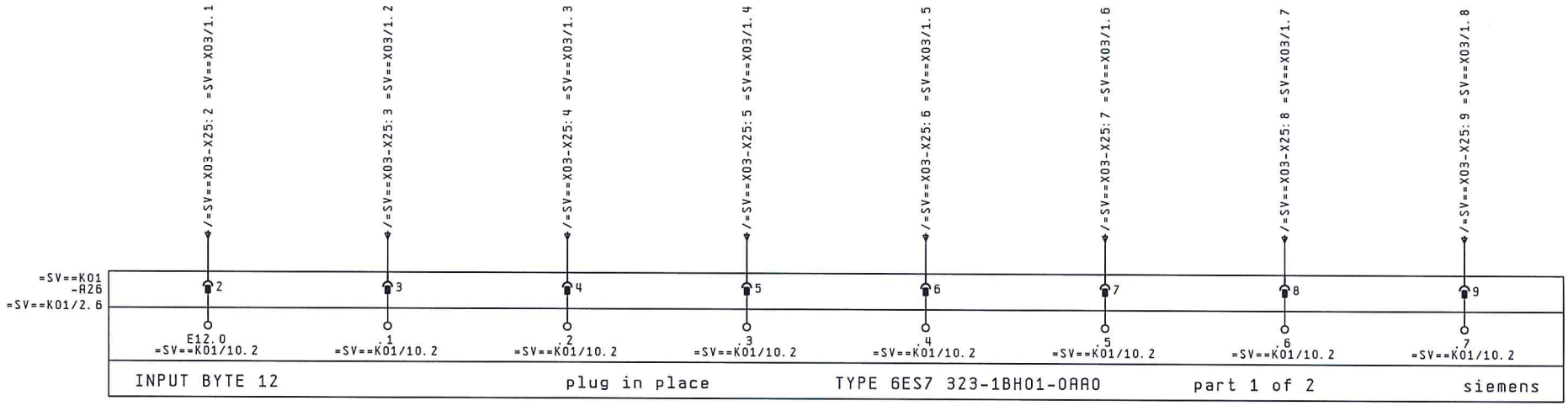
13 Sh.



11

13

			date	26.08.13	Titan Umreifungstechnik	TITAN	plc counter module	= SV==L01	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 12
change	date	name	standa	VDE 0100	origin / replace for / replace through		Möllers		13 Sh.



Signal exchange transport of boxes ready	Signal exchange box position 1	Signal exchange box position 2	Signal exchange start strapping machine	signal exchange door Is opened	signal exchange door Is closed	signal exchange reserve	signal exchange reserve

12

=SV==M01/1

			date	26.08.13	Titan Umreifungstechnik	TITAN	plc input byte 12	= SV==L01	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 13
change	date	name	standa	VDE 0100	origin / replace for / replace through		Möllers		13 Sh.

emergency stop voltage

=SV==K01
-A16
=SV==K01/1.6

OUTPUT BYTE 10 | plug in place | TYPE 6ES7 313-6CF03-0AB0 | part 3 of 4 | siemens

=SV==K01/5.2 A10.0	=SV==K01/5.2 .1	=SV==K01/5.2 .2	=SV==K01/5.2 .3	=SV==K01/5.2 .4	=SV==K01/5.2 .5	=SV==K01/5.2 .6	=SV==K01/5.2 .7
22	23	24	25	26	27	28	29
-X16 1	2	3	4	5	6	7	8
17	18	19	20	21	22	23	24

=SV==L01-W71
ÖLFLEX-FD 855P
36x1,0

+L10 -X16 11	12	13	14	15	16	17	18
17	18	19	20	21	22	23	24

=SV==L01+L10-W71
ÖLFLEX-FD 855P
36x1,0

=SV==L01
+L18

-XS1 E1	E2	E3	E4	F1	F2	F3	F4
-XK1 51	52	53	54	55	56	57	58
-Y11 A1 A2	-Y12 A1 A2	-Y13 A1 A2	-Y14 A1 A2	-Y15 A1 A2	-Y16 A1 A2	-Y17 A1 A2	-Y18 A1 A2
-XK1 63	64	65	66	67	68	69	70

/-XK1:71 /2.1

-XS1 A3

3

=SV==L01+L10-W71
ÖLFLEX-FD 855P
36x1,0

+L10 -X16 9

3

=SV==L01-W71
ÖLFLEX-FD 855P
36x1,0

-X16 32

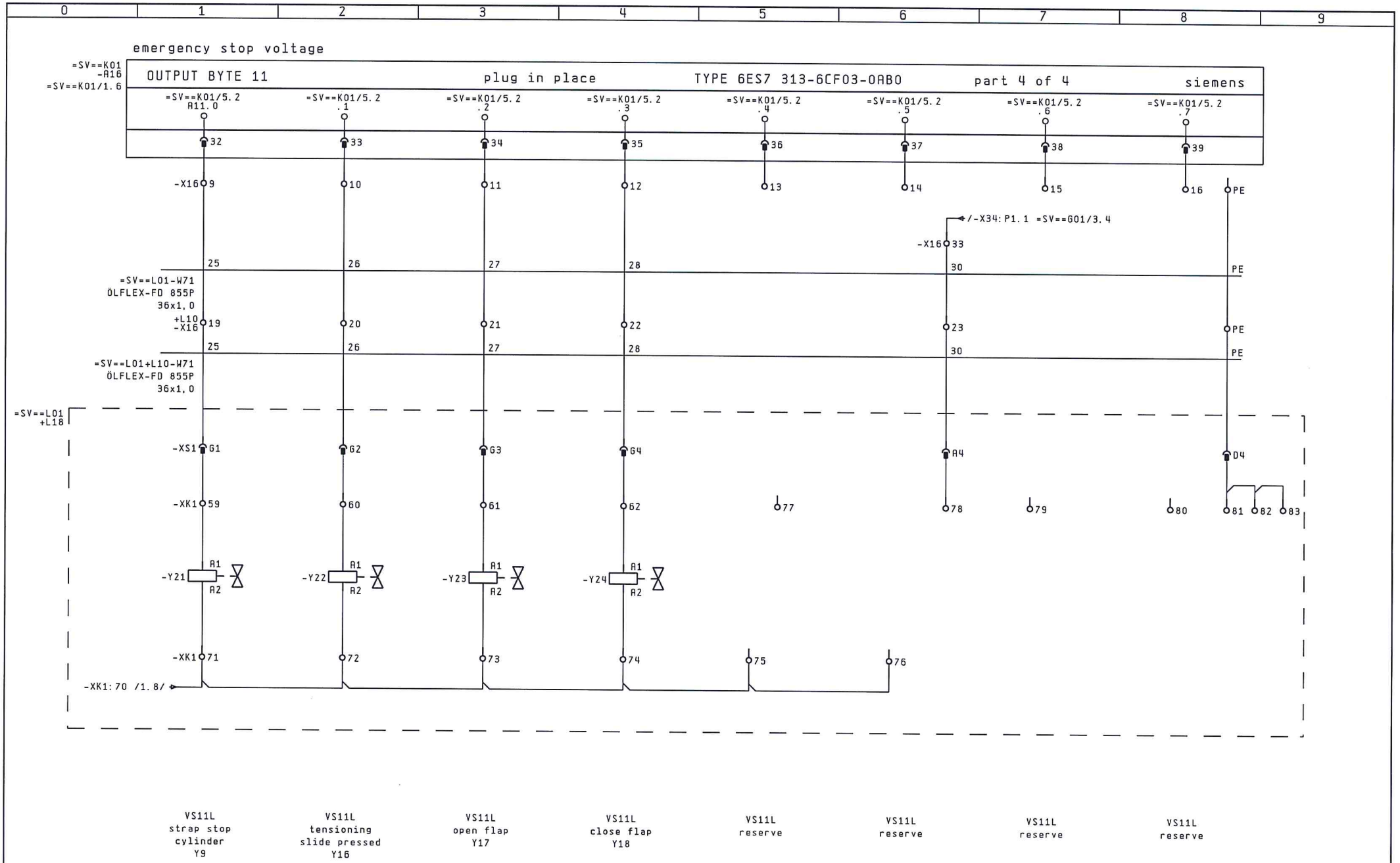
-X34:P2.7 =SV==G01/3.5/

VS11L air valve middle Y1	VS11L air valve quick Y2	VS11L transport motor forward Y3	VS11L transport motor backward Y4	VS11L sealing motor Y5	VS11L tensioning motor Y6	VS11L transport slide Y7	VS11L straightening device Y8

=SV==L01/13

2

			date	26.08.13	Titan Umreifungstechnik	TITAN	plc output byte 10	= SV==M01	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 1
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers		8 Sh.



1 3

			date	26.08.13	Titan Umreifungstechnik	TITAN	plc output byte 11	= SV==M01	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 2
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		8 Sh.

permanent voltage

=SV==K01
-A24
=SV==K01/2.4

OUTPUT BYTE 12 | plug in place | TYPE 6ES7 322-1BL00-0AA0 | part 1 of 4 | siemens

=SV==K01/8.2 A12.0	=SV==K01/8.2 .1	=SV==K01/8.2 .2	=SV==K01/8.2 .3	=SV==K01/8.2 .4	=SV==K01/8.2 .5	=SV==K01/8.2 .6	=SV==K01/8.2 .7
2	3	4	5	6	7	8	9

-A38
A1
A2

-K16
24V
A1
A2

-X64:P2.6 =SV==G01/6.5/

-X64:P2.2 =SV==G01/6.5/

0V DC

14
12
11 =SV==X02/1.5

reserve	reserve	reserve	reserve	reserve	safety door open	reserve	strapping counter

2

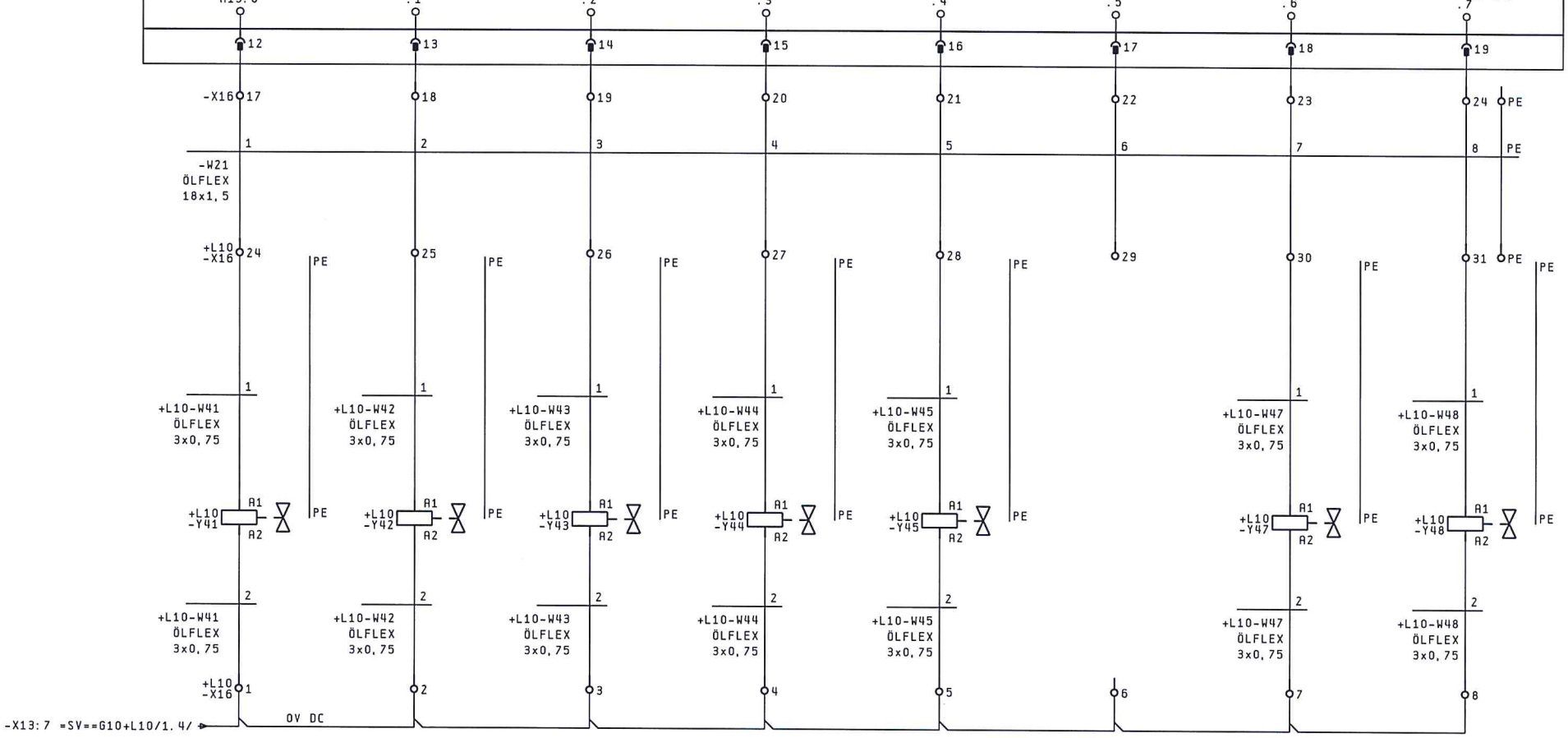
4

			date	26.08.13	Titan Umreifungstechnik	TITAN	plc output byte 12	= SV==M01	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 3
change	date	name	standa	VDE 0100	origin / replace for / replace through		Möllers		8 Sh.

safety door voltage

=SV==K01 -A24
=SV==K01/2.4

OUTPUT BYTE 13 | plug in place | TYPE 6ES7 322-1BL00-0AA0 | part 2 of 4 | siemens



compressed air main valve	strapping head ago	Strapping unit back	Retractable channel before	Retractable channel back	reserve	VS11 strapping head	strap clamp open/close

3 5

			date	26.08.13	Titan Umreifungstechnik	TITAN	plc output byte 13	= SV==M01	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 4
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		8 Sh.

emergency stop voltage

=SV==K01
-A24
=SV==K01/2.4

OUTPUT BYTE 14 | plug in place | TYPE 6ES7 322-1BL00-0AA0 | part 3 of 4 | siemens

=SV==K01/8.2 A14.0	=SV==K01/8.2 .1	=SV==K01/8.2 .2	=SV==K01/8.2 .3	=SV==K01/8.2 .4	=SV==K01/8.2 .5	=SV==K01/8.2 .6	=SV==K01/8.2 .7
22	23	24	25	26	27	28	29
	-X16 25	26	27	28	29	30	31
						9	12
						+L10 -X16 32	+L10 -X16 33

34

-W21
ÖLFLEX
18x1,5

-K51 A1 A2
-K52 A1 A2

-X34:P2.1 =SV==G01/3.5/

+L10 -X16 10
+L10 -X16 34

-X13:3 =SV==G10+L10/1.2/

1 — 2 =SV==D02/1.2
3 — 4 =SV==D02/1.2
5 — 6 =SV==D02/1.2
21 — 22 =SV==N01/3.4

1 — 2 =SV==D02/1.2
3 — 4 =SV==D02/1.2
5 — 6 =SV==D02/1.2
21 — 22 =SV==N01/3.4

dispenser contactor

dispenser contactor

reserve

reserve

reserve

reserve

reserve

reserve

4

6

			date	26.08.13	Titan Umreifungstechnik	TITAN	plc output byte 14	= SV==M01	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 5
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers		8 Sh.

permanent voltage

=SV==K01
-A24
=SV==K01/2.4

OUTPUT BYTE 15 | plug in place | TYPE 6ES7 322-1BL00-0AA0 | part 4 of 4 | siemens

=SV==K01/8.2 A15.0	=SV==K01/8.2 .1	=SV==K01/8.2 .2	=SV==K01/8.2 .3	=SV==K01/8.2 .4	=SV==K01/8.2 .5	=SV==K01/8.2 .6	=SV==K01/8.2 .7
32	33	34	35	36	37	38	39

-H61	-H62	-H63	-H64	-H65	-H66	-H67	-H68
=SV==L01/9.1 gn	=SV==L01/9.3 wh	=SV==L01/9.4 gn	=SV==L01/9.5 gn	=SV==L01/9.7 rd	=SV==L01/9.8 wh	=SV==L01/10.1 ye	=SV==N01/3.3 rd
X1 X2	X1 X2	X1 X2	X1 X2	X1 X2	X1 X2	X1 X2	X1 X2

-X64:P2.4 =SV==G01/6.5/ → 0V DC

control on	manual mode	automatic	cycle start	fault acknowledge	drive to home position	release transport	emergency stop acknowledge

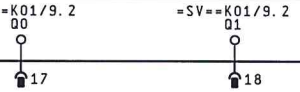
5 7

			date	26.08.13	Titan Umreifungstechnik	TITAN	plc output byte 15	= SV==M01	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh.	6
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			8 Sh.

permanent voltage

=SV==K01
-A25
=SV==K01/2.5

OUTPUTS Q0/Q1	TYPE 6ES7 350-1AH03-0AE0	part 3 of 3	siemens



reserve reserve

6 8

			date	26.08.13	Titan Umreifungstechnik	TITAN	plc counter module	= SV==M01	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 7	
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		8 Sh.	

permanent voltage

=SV==K01
-A26
=SV==K01/2.6

OUTPUT BYTE 16 | plug in place | TYPE 6ES7 323-1BH01-0AA0 | part 2 of 2 | siemens

=SV==K01/10.2 A16.0	=SV==K01/10.2 .1	=SV==K01/10.2 .2	=SV==K01/10.2 .3	=SV==K01/10.2 .4	=SV==K01/10.2 .5	=SV==K01/10.2 .6	=SV==K01/10.2 .7
22	23	24	25	26	27	28	29

-K81 24V	-K82 24V	-K83 24V	-K84 24V	-K85 24V	-K86 24V	-K87 24V	-K88 24V
A1 / A2	A1 / A2	A1 / A2	A1 / A2	A1 / A2	A1 / A2	A1 / A2	A1 / A2

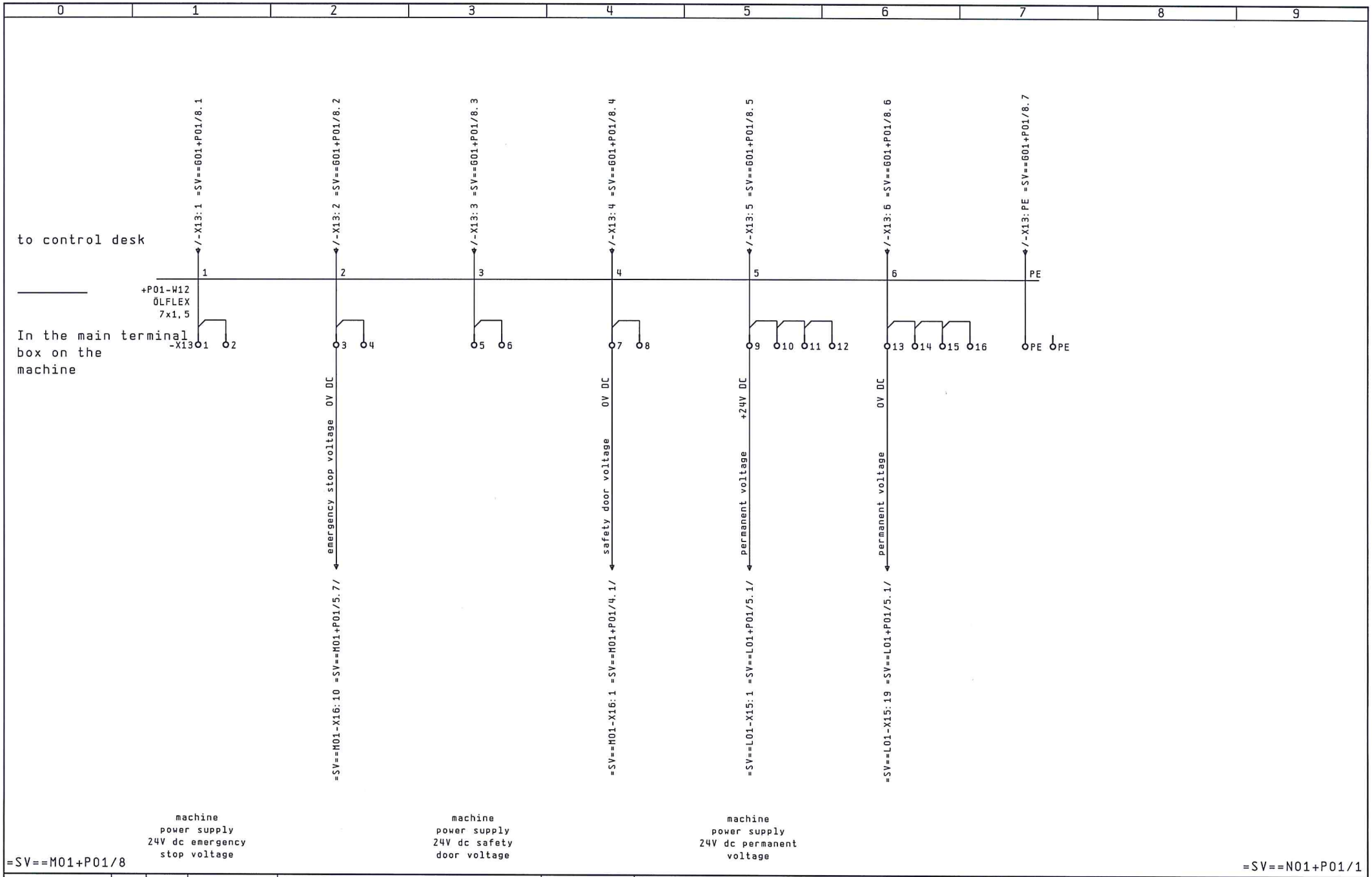
-X64: P2.8 =SV==G01/6.5/ — 0V DC

14 / 12 / 11	14 / 12 / 11	14 / 12 / 11	14 / 12 / 11	14 / 12 / 11	14 / 12 / 11	14 / 12 / 11	14 / 12 / 11
=SV==X03/2.1	=SV==X03/2.2	=SV==X03/2.3	=SV==X03/2.4	=SV==X03/2.5	=SV==X03/2.6	=SV==X03/2.7	=SV==X03/2.8
Signal exchange strapping machine Ready	Signal exchange strapping machine disorder	Signal exchange strapping machine takeover ready	Signal exchange strapping machine takeover ready	Signal exchange strapping machine empty message Magazine	signal exchange strapping machine release doors Open	signal exchange strapping machine reserve	signal exchange strapping machine reserve

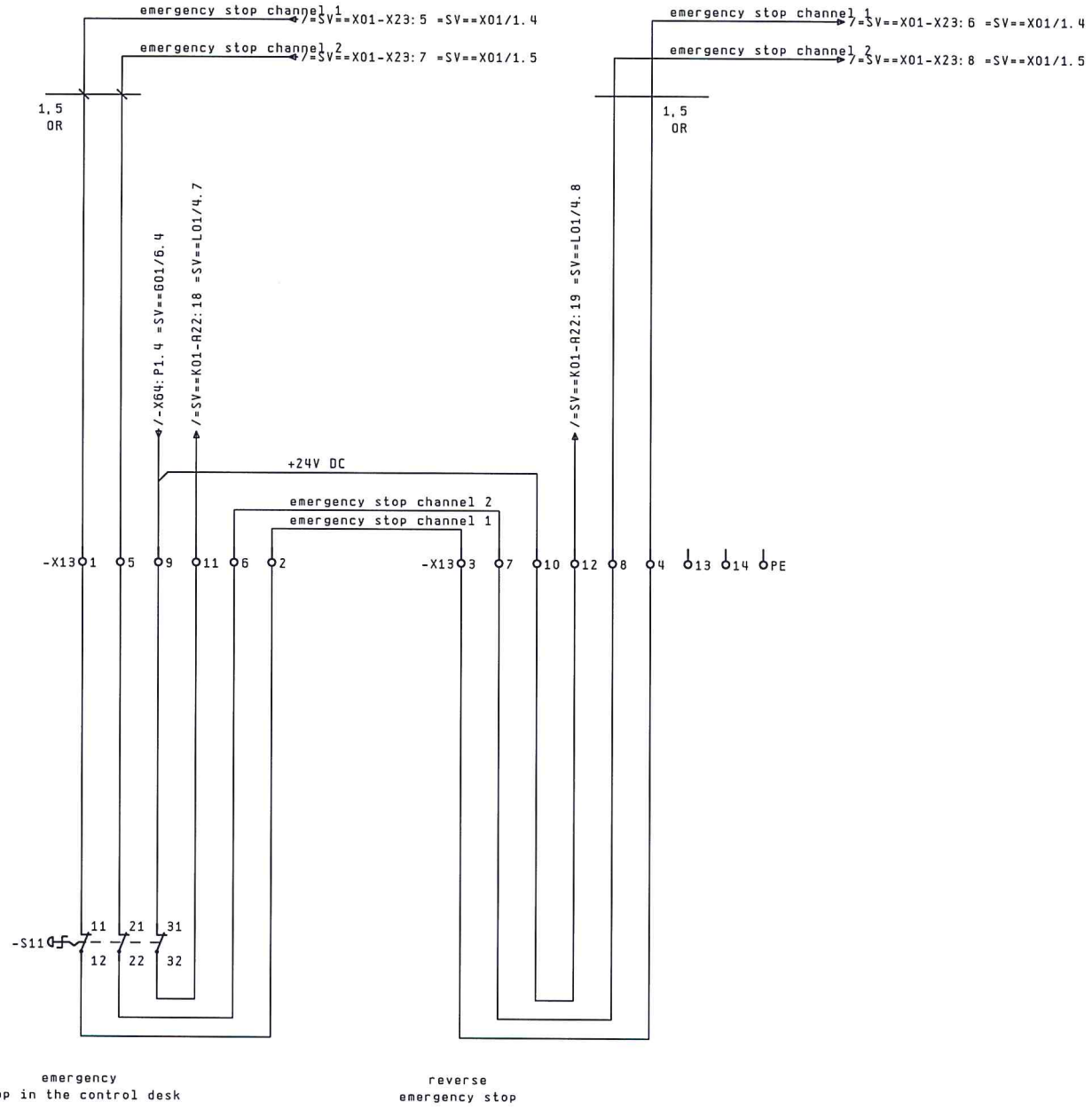
7

=SV==G10+L10/1

			date	26.08.13	Titan Umreifungstechnik	TITAN	plc output byte 16	= SV==M01	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 8
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		8 Sh.



			date	26.08.13	Titan Umreifungstechnik	TITAN	24V power supply in the main terminal box VS11-S	= SV==G10	+ L10	
			editor	Lo Grasso	Berliner Straße 51-55			T13079		Sh. 1
			check.	26.11.13	58332 Schwelm					1 Sh.
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		



=SV==G10+L10/1

2

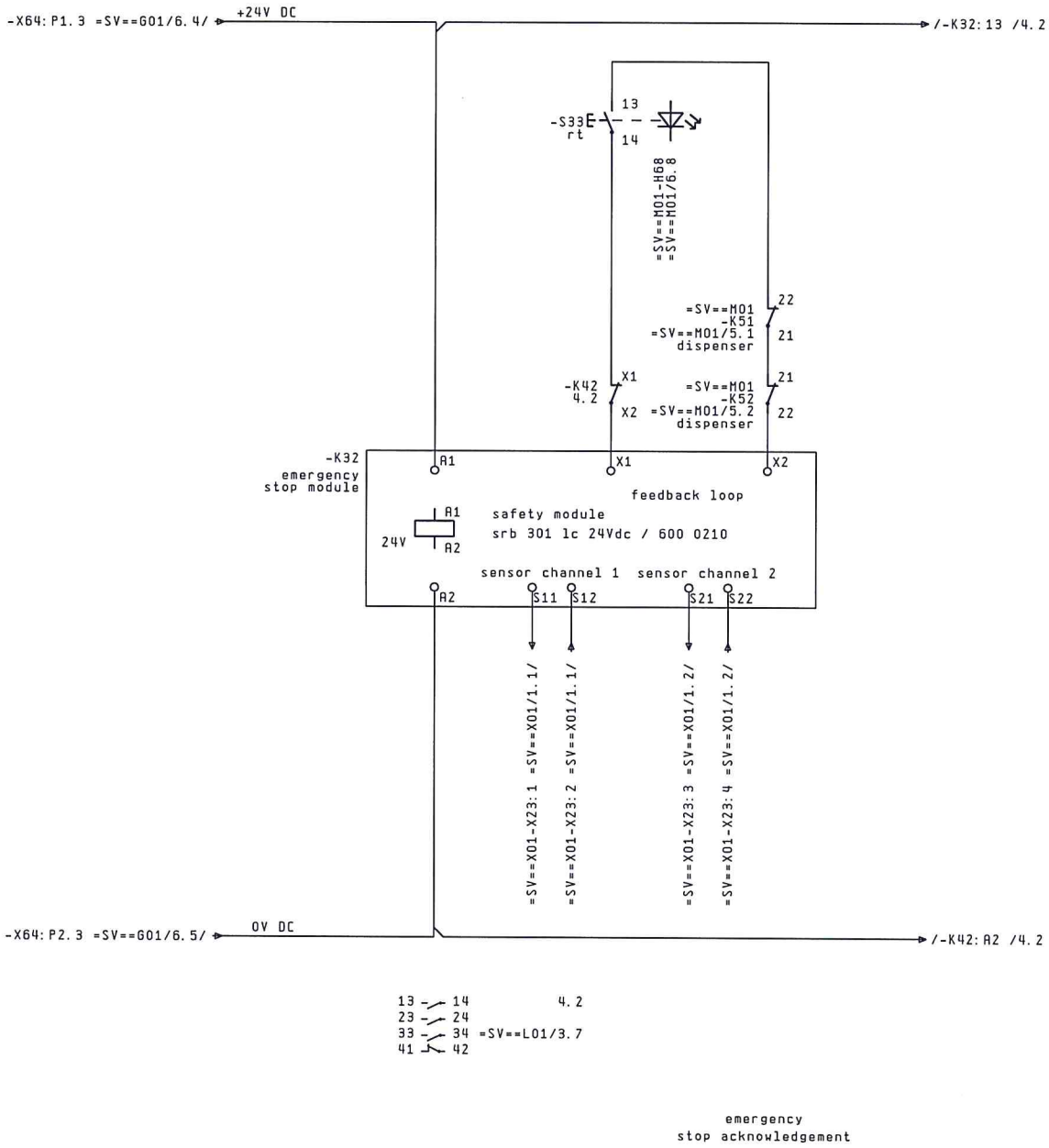
			date	26.08.13	Titan Umreifungstechnik		emergency stop loop	= SV==N01	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55	TITAN					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 1	
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			4 Sh.

0	1	2	3	4	5	6	7	8	9

1

3

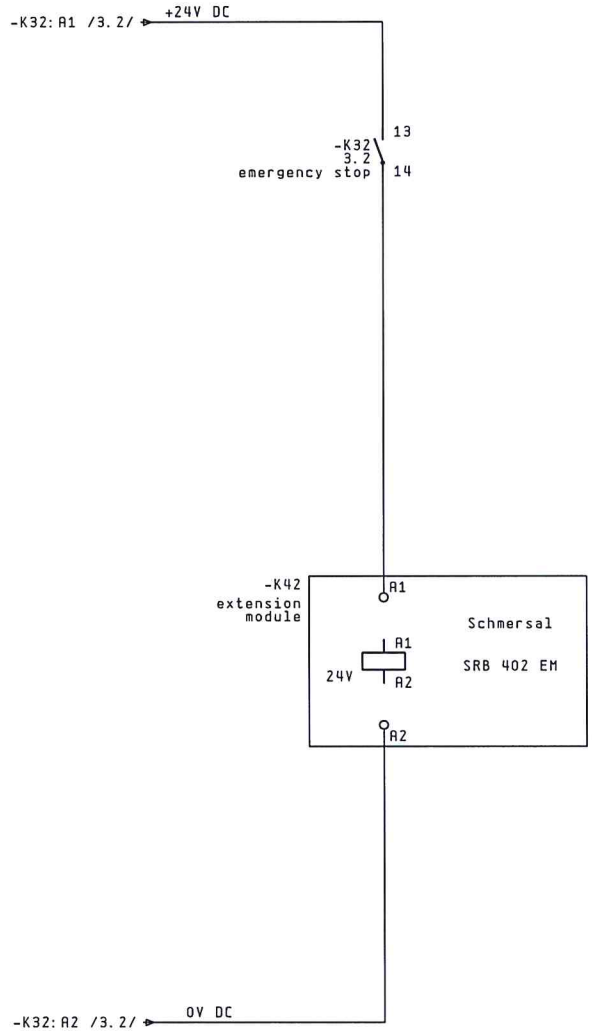
			date	26.08.13	Titan Umreifungstechnik		empty sheet	= SV==N01	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh.	2
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			4 Sh.



2

4

			date	26.08.13	Titan Umreifungstechnik		TITAN	emergency stop module	= SV==N01	+ P01	
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm			VS11-S	T13079		Sh. 3
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			4 Sh.



13 - 14
23 - 24
33 - 34 =SV==G01/3.4
43 - 44 =SV==G01/4.4
51 - 52
61 - 62
X1 - X2 3.3

emergency
stop extension module 1

3

=SV==N02/1

			date	26.08.13	Titan Umreifungstechnik		TITANO	emergency stop extension module	= SV==N01	+ P01	
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm			VS11-S	T13079		Sh. 4
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			4 Sh.

0	1	2	3	4	5	6	7	8	9

=SV==N01/4

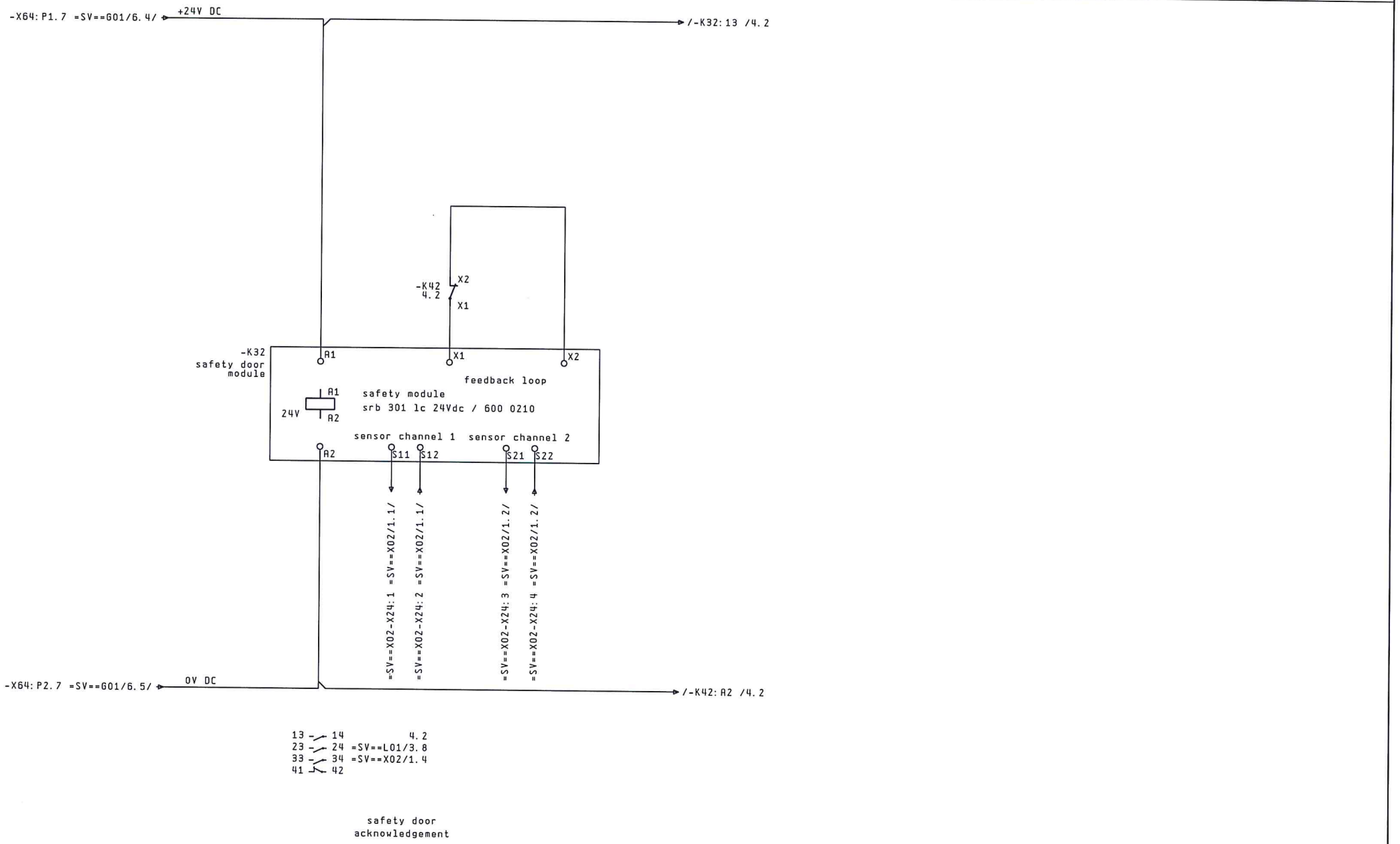
2

			date	26.08.13	Titan Umreifungstechnik	TITAN	empty sheet	= SV==N02	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 1
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers		4 Sh.

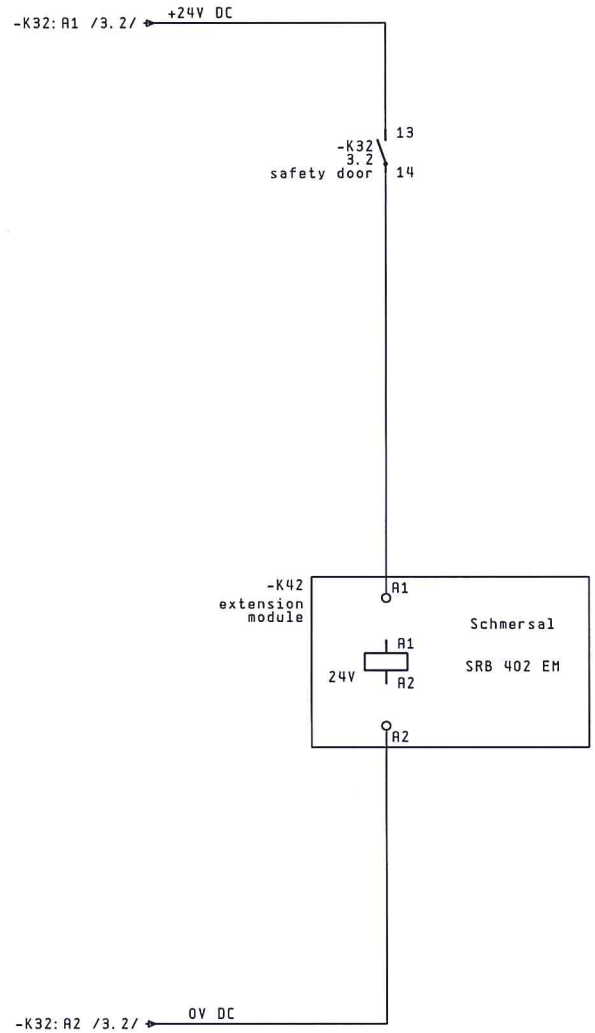
0	1	2	3	4	5	6	7	8	9

1 3

			date	26.08.13	Titan Umreifungstechnik		empty sheet	= SV==NO2	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55	TITAN					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh.	2
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			4 Sh.



			date	26.08.13	Titan Umreifungstechnik	TITAN	safety door module	= SV==N02	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 3	
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		4 Sh.	



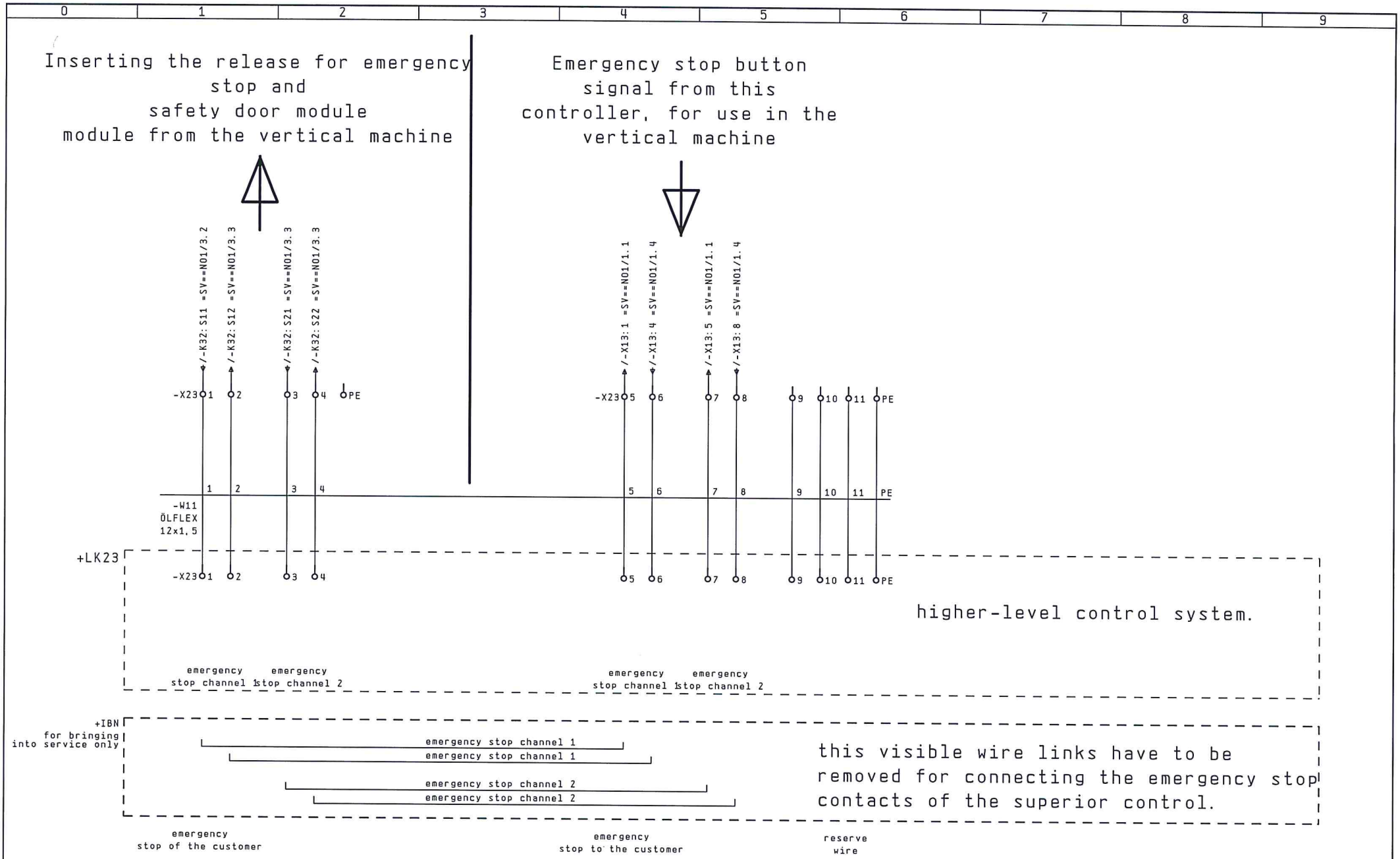
13 14
23 24
33 34
43 44 =SV==G01/4.4
51 52
61 62
X1 X2 3.3

safety door
extension module 1

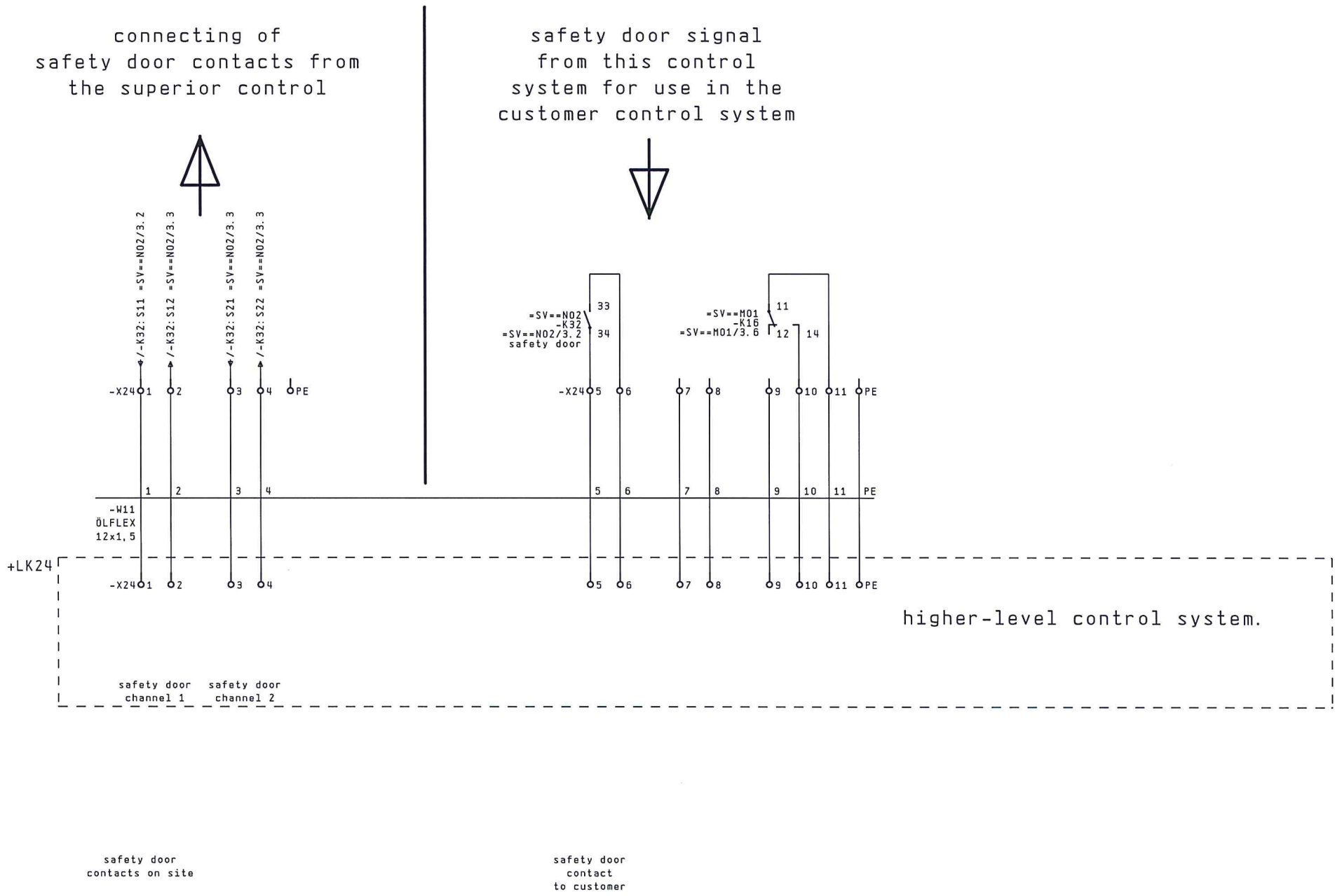
3

=SV==X01/1

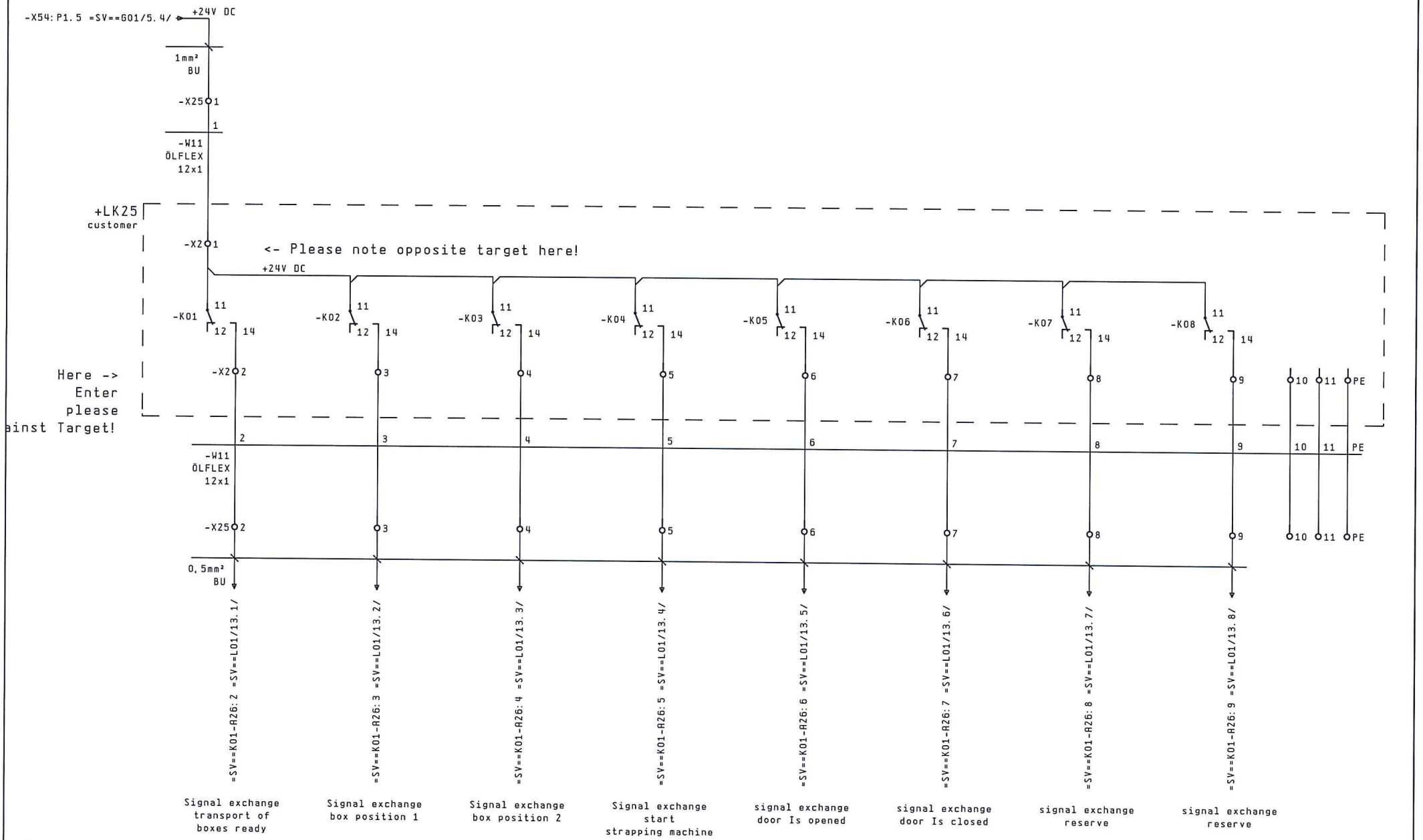
			date	26.08.13	Titan Umreifungstechnik		safety door extension module	= SV==N02	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 4	
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		4 Sh.	



			date	26.08.13	Titan Umreifungstechnik	TITAN	signal exchange security	= SV==XO1	+ PO1		
			editor	Lo Grasso	Berliner Straße 51-55		vertical machine <-> Horizontal machine	T13079		Sh.	1
			check.	26.11.13	58332 Schwelm		VS11-S			1 Sh.	
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			



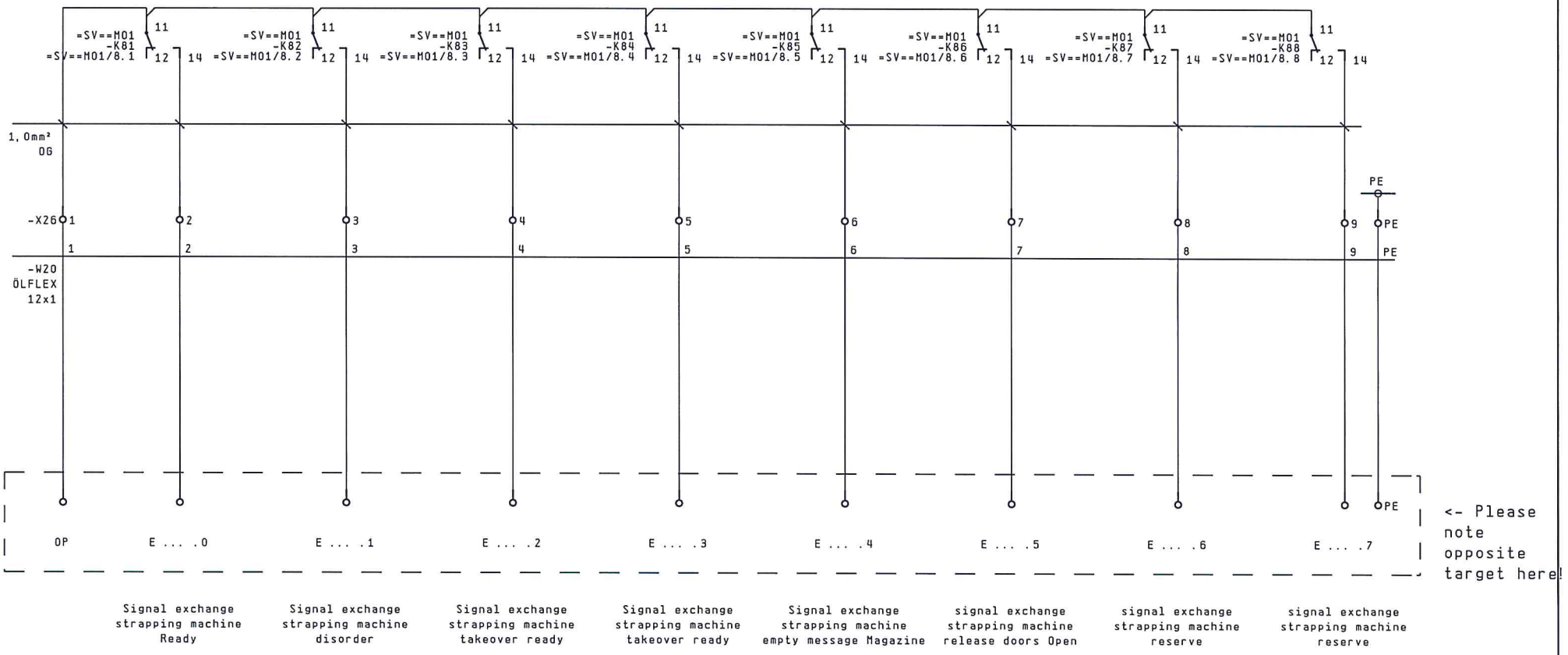
			date	26.08.13	Titan Umreifungstechnik		signal exchange safety door	= SV==X02	+ P01			
			editor	Lo Grasso	Berliner Straße 51-55	TITAN	customer control <-> P.W. Lenzen					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079			Sh.	1
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers				1 Sh.



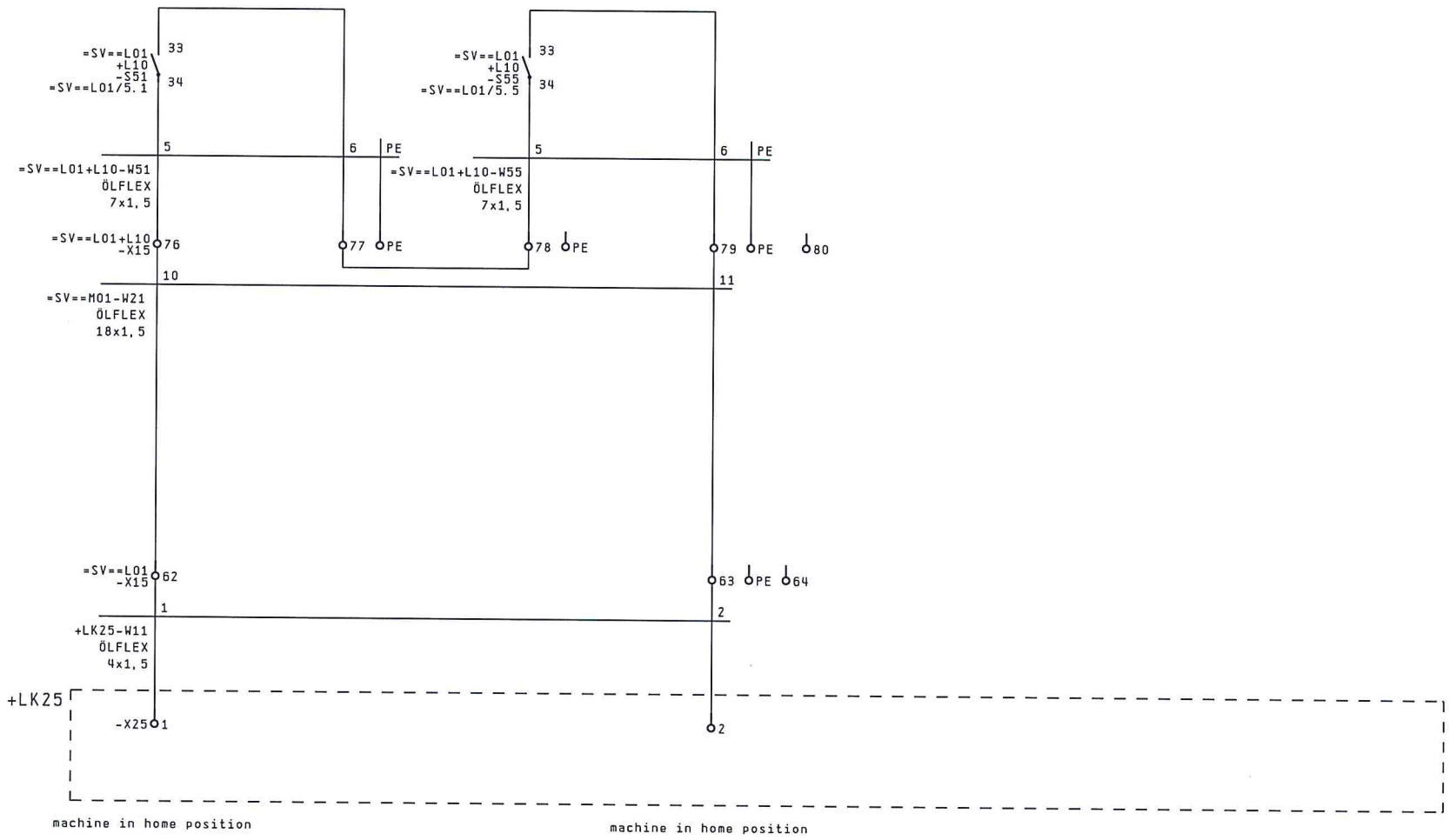
=SV==X02/1

2

			date	26.08.13	Titan Umreifungstechnik	TITAN	signal exchange customer control -> BiNaTec	= SV==X03	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 1
change	date	name	standa	VDE 0100	origin / replace for / replace through		Möllers		3 Sh.



			date	26.08.13	Titan Umreifungstechnik		signal exchange BiNaTec -> customer control	= SV==X03	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079			Sh. 2
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			3 Sh.



2

=SV==AUSW/1

			date	26.08.13	Titan Umreifungstechnik	TITAN	signal exchange home position	= SV==X03	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh.	3
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			3 Sh.

BI_A3R1D

terminal strip and connector overview

terminal strip and connector designation	text of the strip definition	terminals / connectors					graphic page of the terminal strip
		first	last	amount PE	amount N	totally amount	
=SV==D01+P01-X1		1	PE	1	0	4	=SV==AUSW+P01/2
=SV==D02+P01-X3		1	PE	1	0	4	=SV==AUSW+P01/3
=SV==F01+P01-X11		3	PE	3	0	9	=SV==AUSW+P01/4
=SV==G01+P01-X10		1	PE	2	0	6	=SV==AUSW+P01/5
=SV==G01+P01-X13		1	PE	2	0	8	=SV==AUSW+P01/6
=SV==L01+P01-X15		1	PE	3	0	67	=SV==AUSW+P01/7
=SV==M01+P01-X16		1	PE	2	0	36	=SV==AUSW+P01/10
=SV==N01+P01-X13		1	PE	1	0	15	=SV==AUSW+P01/12
=SV==X01+P01-X23		1	PE	2	0	13	=SV==AUSW+P01/13
=SV==X02+P01-X24		1	PE	2	0	13	=SV==AUSW+P01/14
=SV==X03+P01-X25		1	PE	1	0	12	=SV==AUSW+P01/15
=SV==X03+P01-X26		1	PE	1	0	10	=SV==AUSW+P01/16

			date	26.08.13	Titan Umreifungstechnik	TITAN	terminal strip and connector overview	= SV==AUSW	+ P01	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 1
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers			35 Sh.

terminal diagram

BI_A3K2D

function text	=SV==D01+P01-W11	cable name	terminal strip designation =SV==D01+P01-X1						cable name					page/path
	ÖLFLEX	typ	target destination	connection	terminal number	jumper	connection name	target destination	connection	typ				
	1		-X11	L1	1	o		-Q11	1					=SV==D01/1.1
	2		-X11	L2	2	o		-Q11	3					=SV==D01/1.1
	3		-X11	L3	3	o		-Q11	5					=SV==D01/1.1
	PE		-X11	PE	PE	o	PE	-PE12	PE					=SV==D01/1.2

1

3

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==D01+P01-X1	= SV==AUSW	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 2	
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		35 Sh.	

BI_A3K2D

terminal diagram

function text	=SV==D02+P01-W11	cable name	terminal strip designation =SV==D02+P01-X3						cable name					page/path
	ÖLFLEX	typ	target destination	connection	terminal number	jumper	connection name	target destination	connection	typ				
dispenser motor	1		+L10-X3	1	1	o		=SV==M01-K52	2					=SV==D02/1.2
-	2		+L10-X3	2	2	o		=SV==M01-K52	4					=SV==D02/1.2
-	3		+L10-X3	3	3	o		=SV==M01-K52	6					=SV==D02/1.2
-	PE		+L10-X3	PE	PE	o	PE							=SV==D02/1.2

2 4

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==D02+P01-X3	= SV==AUSW / + P01
			editor	Lo Grasso	Berliner Straße 51-55			
			check.	26.11.13	58332 Schwelm		VS11-S	T13079 / Sh. 3
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers	35 Sh.

BI_A3K2D

terminal diagram

function text	=SV==F01+P01-W24 ÖLFLEX	typ	cable name	terminal strip designation =SV==F01+P01-X11 target destination	connection	terminal number	jumper	connection name	target destination	connection	typ	cable name	page/path
Cabinet socket outlet only		X		-X15	L	3			-F15	2		X	=SV==F01/1.5
-		X		-S16	21	4							=SV==F01/1.6
controller air conditioner	1			-M17	L	5							=SV==F01/1.7
Cabinet socket outlet only		X		-X15	N	6			-F15	4		X	=SV==F01/1.5
-		X		-E16	N	7							=SV==F01/1.6
controller air conditioner	2			-M17	N	8							=SV==F01/1.7
Cabinet socket outlet only				-X15	PE	PE	o						=SV==F01/1.5
-						PE	o						=SV==F01/1.6
controller air conditioner	PE			-M17	PE	PE	o						=SV==F01/1.8

3 5

			date	26.08.13	Titan Umreifungstechnik	TITANO	=SV==F01+P01-X11	= SV==AUSW + P01
			editor	Lo Grasso	Berliner Straße 51-55			
			check.	26.11.13	58332 Schwelm		VS11-S	T13079 Sh. 4
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers	35 Sh.

BI_A3K2D

terminal diagram

function text							=SV==G01+P01-W12 ÖLFLEX	=SV==G01+P01-W10 ÖLFLEX	cable name typ	terminal strip designation =SV==G01+P01-X10 target destination	connection	terminal number	jumper	connection name	target destination	connection	cable name typ					page/path
external power supply 230V ac								1		-X11	1	1	o		-F14	1		X				=SV==G01/1.1
-								2		-X11	2	2	o		-F14	3		X				=SV==G01/1.1
-								PE		-X11	PE	PE	o		-PE12	PE						=SV==G01/1.1
-							1			-X12	1	3	o		-F16	1		X				=SV==G01/1.3
-							2			-X12	2	4	o		-F16	3		X				=SV==G01/1.3
-							PE			-X12	PE	PE	o		-PE13	PE						=SV==G01/1.3

4

6

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==G01+P01-X10	= SV==AUSW	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 5
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers	35 Sh.

BI_A3K2D

terminal diagram

terminal strip designation

=SV==G01+P01-X13

function text	=SV==G10+P01-W12	cable name	target destination	connection	terminal number	jumper	connection name	target destination	connection	cable name	page/path
	ÖLFLEX	typ								typ	
machine power supply 24V dc emergency stop voltage	1		=SV==G10+L10-X13	1	1	o		-X34	P1.2		=SV==G01/8.1
"	2		=SV==G10+L10-X13	3	2	o		-X34	P2.2		=SV==G01/8.2
machine power supply 24V dc	3		=SV==G10+L10-X13	5	3	o		-X44	P1.1		=SV==G01/8.3
"	4		=SV==G10+L10-X13	7	4	o		-X44	P2.1		=SV==G01/8.4
machine power supply 24V dc	5		=SV==G10+L10-X13	9	5	o		-X54	P1.7		=SV==G01/8.5
"	6		=SV==G10+L10-X13	13	6	o		-X54	P2.7		=SV==G01/8.6
"	PE		=SV==G10+L10-X13	PE	PE	o					=SV==G01/8.7
"					PE	o					=SV==G01/8.7

5 7

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==G01+P01-X13	= SV==AUSW	+ P01	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 6
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		35 Sh.

BI_A3K2D

terminal diagram

terminal strip designation

=SV==L01+P01-X15

function text	=SV==L01+P01-W51	=SV==L01+P01-W71	cable name	target destination	connection	terminal number	jumper	connection name	target destination	connection	cable name	page/path
	ÖLFLEX	ÖLFLEX-FD 855P	typ								typ	
VS11L strap stop switch B1		1		+L10-X15	37	1			=SV==G01-X54	P1.10		=SV==L01/7.1
VS11L clamp position B4						2						=SV==L01/7.4
VS11L safety switch flap						3						=SV==L01/7.5
-						4						=SV==L01/7.6
VS11L strap stop switch B1		2		+L10-X15	38	5			=SV==G01-X54	P2.10		=SV==L01/7.1
VS11L clamp position B4						6						=SV==L01/7.4
VS11L safety switch flap						7						=SV==L01/7.5
VS11L head before package B7						8						=SV==L01/7.6
VS11L counter switch B2		31		+L10-X15	39	9	o		=SV==K01-A25	5		=SV==L01/7.2
-		32		+L10-X15	40	10	o		=SV==K01-A25	3		=SV==L01/7.2
reserve						11	o	E2.0	=SV==K01-A16	2		=SV==L01/1.1
-						12	o	E2.1	=SV==K01-A16	3		=SV==L01/1.2
-						13	o	E2.2	=SV==K01-A16	4		=SV==L01/1.3
-						14	o	E2.3	=SV==K01-A16	5		=SV==L01/1.4
-						15	o	E2.4	=SV==K01-A16	6		=SV==L01/1.5
-						16	o	E2.5	=SV==K01-A16	7		=SV==L01/1.6
-						17	o	E2.6	=SV==K01-A16	8		=SV==L01/1.7
-						18	o	E2.7	=SV==K01-A16	9		=SV==L01/1.8
-						19	o	E3.0	=SV==K01-A16	12		=SV==L01/2.1
-						20	o	E3.1	=SV==K01-A16	13		=SV==L01/2.2
-						21	o	E3.2	=SV==K01-A16	14		=SV==L01/2.3
-						22	o	E3.3	=SV==K01-A16	15		=SV==L01/2.4
-						23	o	E3.4	=SV==K01-A16	16		=SV==L01/2.5
-						24	o	E3.5	=SV==K01-A16	17		=SV==L01/2.6
-						25	o	E3.6	=SV==K01-A16	18		=SV==L01/2.7
-						26	o	E3.7	=SV==K01-A16	19		=SV==L01/2.8
strapping head home position	1			+L10-X15	41	27	o	E6.0	=SV==K01-A22	22		=SV==L01/5.1
-	2			+L10-X15	42	28	o	E6.1	=SV==K01-A22	23		=SV==L01/5.2
Strapping unit to the package	3			+L10-X15	43	29	o	E6.2	=SV==K01-A22	24		=SV==L01/5.3
reserve	4			+L10-X15	44	30	o	E6.3	=SV==K01-A22	25		=SV==L01/5.4
Retractable channel rear	5			+L10-X15	45	31	o	E6.4	=SV==K01-A22	26		=SV==L01/5.5
-	6			+L10-X15	46	32	o	E6.5	=SV==K01-A22	27		=SV==L01/5.6

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			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==L01+P01-X15		= SV==AUSW	+ P01	
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S		T13079		Sh. 7
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			35 Sh.

BI_A3K2D

terminal diagram

terminal strip designation

=SV==L01+P01-X15

function text						=SV==X03+LK25-W11	=SV==L01+P01-W71	=SV==L01+P01-W51	cable name	target destination	connection	terminal number	jumper	connection name	target destination	connection	cable name	=SV==M01+P01-W21				page/path
						ÖLFLEX	ÖLFLEX-FD 855P	ÖLFLEX	typ								typ	ÖLFLEX				
Retractable channel closed								7		+L10-X15	47	33	o	E6.6	=SV==K01-A22	28						=SV==L01/5.7
reserve								8		+L10-X15	48	34	o	E6.7	=SV==K01-A22	29						=SV==L01/5.8
Locking pin strapping aggregate in								9		+L10-X15	49	35	o	E7.0	=SV==K01-A22	32						=SV==L01/6.1
reserve								10		+L10-X15	50	36	o	E7.1	=SV==K01-A22	33						=SV==L01/6.2
-								11		+L10-X15	51	37	o	E7.2	=SV==K01-A22	34						=SV==L01/6.3
Main stop valve pressure switch								12		+L10-X15	52	38	o	E7.3	=SV==K01-A22	35						=SV==L01/6.4
VS11 unit pressure switch								13		+L10-X15	53	39	o	E7.4	=SV==K01-A22	36						=SV==L01/6.5
reserve								14		+L10-X15	54	40	o	E7.5	=SV==K01-A22	37						=SV==L01/6.6
-								15		+L10-X15	55	41	o	E7.6	=SV==K01-A22	38						=SV==L01/6.7
-								16		+L10-X15	56	42	o	E7.7	=SV==K01-A22	39						=SV==L01/6.8
-								PE		+L10-X15	PE	PE	o									=SV==L01/6.8
VS11L strap stop switch B1							4			+L10-X15	57	43	o	E8.0	=SV==K01-A23	2						=SV==L01/7.1
VS11L counter switch B2							5			+L10-X15	58	44	o		=SV==K01-A25	13						=SV==L01/7.2
VS11L 0-position B3							6			+L10-X15	59	45	o	E8.2	=SV==K01-A23	4						=SV==L01/7.3
VS11L clamp position B4							7			+L10-X15	60	46	o	E8.3	=SV==K01-A23	5						=SV==L01/7.4
VS11L safety switch flap							8			+L10-X15	61	47	o	E8.4	=SV==K01-A23	6						=SV==L01/7.5
VS11L head before package B7							9			+L10-X15	62	48	o	E8.5	=SV==K01-A23	7						=SV==L01/7.6
VS11L head on package B8							10			+L10-X15	63	49	o	E8.6	=SV==K01-A23	8						=SV==L01/7.7
VS11L service - switch strap							11			+L10-X15	64	50	o	E8.7	=SV==K01-A23	9						=SV==L01/7.8
VS11L service - switch sealing							12			+L10-X15	65	51	o	E9.0	=SV==K01-A23	12						=SV==L01/8.1
VS11L reserve							13			+L10-X15	66	52	o	E9.1	=SV==K01-A23	13						=SV==L01/8.2
-							14			+L10-X15	67	53	o	E9.2	=SV==K01-A23	14						=SV==L01/8.3
reserve								17		+L10-X15	68	54	o	E11.1	=SV==K01-A23	33						=SV==L01/10.2
strap accumulator full								18		+L10-X15	69	55	o	E11.2	=SV==K01-A23	34						=SV==L01/10.3
strap accumulator empty								19		+L10-X15	70	56	o	E11.3	=SV==K01-A23	35						=SV==L01/10.4
strap accumulator end								20		+L10-X15	71	57	o	E11.4	=SV==K01-A23	36						=SV==L01/10.5
fill strap accumulator								21		+L10-X15	72	58	o	E11.5	=SV==K01-A23	37						=SV==L01/10.6
strap accumulator reserve								22		+L10-X15	73	59	o	E11.6	=SV==K01-A23	38						=SV==L01/10.7
strap accumulator strap low								23		+L10-X15	74	60	o	E11.7	=SV==K01-A23	39						=SV==L01/10.8
-								24		+L10-X15	75	61	o									=SV==L01/10.8
-												PE	o									=SV==L01/10.8
machine in home position						1				=SV==X03+LK25-X25	1	62	o		+L10-X15	76		10				=SV==X03/3.1

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			date	26.08.13	Titan Umreifungstechnik	TITANO	=SV==L01+P01-X15	=SV==AUSW	+P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 8
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		35 Sh.

BI_A3K2D

terminal diagram

terminal strip designation

=SV==L01+P01-X15

function text	=SV==X03+LK25-W11 ÖLFLEX	cable name typ	target destination	connection	terminal number	jumper	connection name	target destination	connection	cable name typ	=SV==M01+P01-W21 ÖLFLEX	page/path
machine in home position	2		=SV==X03+LK25-X25	2	63	o		+L10-X15	79		11	=SV==X03/3.4
-					64	o						=SV==X03/3.4
-					PE	o						=SV==X03/3.4

8

10

			date	26.08.13	Titan Umreifungstechnik	=SV==L01+P01-X15	= SV==AUSW + P01
			editor	Lo Grasso	Berliner Straße 51-55		
			check.	26.11.13	58332 Schwelm	VS11-S	T13079 Sh. 9
change	date	name	standa	VDE 0100	origin / replace for / replace through	Möllers	35 Sh.

BI_A3K2D

terminal diagram

terminal strip designation

=SV==M01+P01-X16

function text	=SV==M01+P01-W21 ÖLFLEX	=SV==L01+P01-W71 ÖLFLEX-FD 855P	cable name typ	target destination	connection	terminal number	jumper	connection name	target destination	connection	cable name typ	page/path
VS11L air valve middle Y1		17		+L10-X16	11	1	o	A10.0	=SV==K01-A16	22		=SV==M01/1.1
VS11L air valve quick Y2		18		+L10-X16	12	2	o	A10.1	=SV==K01-A16	23		=SV==M01/1.2
VS11L transport motor forward Y3		19		+L10-X16	13	3	o	A10.2	=SV==K01-A16	24		=SV==M01/1.3
VS11L transport motor backward Y4		20		+L10-X16	14	4	o	A10.3	=SV==K01-A16	25		=SV==M01/1.4
VS11L sealing motor Y5		21		+L10-X16	15	5	o	A10.4	=SV==K01-A16	26		=SV==M01/1.5
VS11L tensioning motor Y6		22		+L10-X16	16	6	o	A10.5	=SV==K01-A16	27		=SV==M01/1.6
VS11L transport slide Y7		23		+L10-X16	17	7	o	A10.6	=SV==K01-A16	28		=SV==M01/1.7
VS11L straightening device Y8		24		+L10-X16	18	8	o	A10.7	=SV==K01-A16	29		=SV==M01/1.8
VS11L strap stop cylinder Y9		25		+L10-X16	19	9	o	A11.0	=SV==K01-A16	32		=SV==M01/2.1
VS11L tensioning slide pressed Y16		26		+L10-X16	20	10	o	A11.1	=SV==K01-A16	33		=SV==M01/2.2
VS11L open flap Y17		27		+L10-X16	21	11	o	A11.2	=SV==K01-A16	34		=SV==M01/2.3
VS11L close flap Y18		28		+L10-X16	22	12	o	A11.3	=SV==K01-A16	35		=SV==M01/2.4
VS11L reserve						13	o	A11.4	=SV==K01-A16	36		=SV==M01/2.5
-						14	o	A11.5	=SV==K01-A16	37		=SV==M01/2.6
-						15	o	A11.6	=SV==K01-A16	38		=SV==M01/2.7
-						16	o	A11.7	=SV==K01-A16	39		=SV==M01/2.8
compressed air main valve	1			+L10-X16	24	17	o	A13.0	=SV==K01-A24	12		=SV==M01/4.1
strapping head ago	2			+L10-X16	25	18	o	A13.1	=SV==K01-A24	13		=SV==M01/4.2
Strapping unit back	3			+L10-X16	26	19	o	A13.2	=SV==K01-A24	14		=SV==M01/4.3
Retractable channel before	4			+L10-X16	27	20	o	A13.3	=SV==K01-A24	15		=SV==M01/4.4
Retractable channel back	5			+L10-X16	28	21	o	A13.4	=SV==K01-A24	16		=SV==M01/4.5
reserve	6			+L10-X16	29	22	o	A13.5	=SV==K01-A24	17		=SV==M01/4.6
VS11 strapping head	7			+L10-X16	30	23	o	A13.6	=SV==K01-A24	18		=SV==M01/4.7
strap clamp open/close	8			+L10-X16	31	24	o	A13.7	=SV==K01-A24	19		=SV==M01/4.8
dispenser contactor						25	o	A14.1	=SV==K01-A24	23		=SV==M01/5.2
reserve						26	o	A14.2	=SV==K01-A24	24		=SV==M01/5.3
-						27	o	A14.3	=SV==K01-A24	25		=SV==M01/5.4
-						28	o	A14.4	=SV==K01-A24	26		=SV==M01/5.5
-						29	o	A14.5	=SV==K01-A24	27		=SV==M01/5.6
-	9			+L10-X16	32	30	o	A14.6	=SV==K01-A24	28		=SV==M01/5.7
-	12			+L10-X16	33	31	o	A14.7	=SV==K01-A24	29		=SV==M01/5.8
VS11L air valve middle Y1		3		+L10-X16	9	32	o		=SV==G01-X34	P2.7		=SV==M01/1.1

			date	26.08.13	Titan Umreifungstechnik	=SV==M01+P01-X16	= SV==AUSW + P01
			editor	Lo Grasso	Berliner Straße 51-55		
			check.	26.11.13	58332 Schwelm	VS11-S	T13079 Sh. 10
change	date	name	standa	VDE 0100	origin / replace for / replace through	Möllers	35 Sh.

BI_A3K2D

terminal diagram

terminal strip designation

=SV==M01+P01-X16

function text	=SV==M01+P01-W21	=SV==L01+P01-W71	cable name	target destination	connection	terminal number	jumper	connection name	target destination	connection	cable name	page/path
	ÖLFLEX	ÖLFLEX-FD 855P	typ								typ	
VS11L reserve		30		+L10-X16	23	33	o		=SV==G01-X34	P1.1		=SV==M01/2.6
reserve						34	o					=SV==M01/5.8
VS11L reserve		PE		+L10-X16	PE	PE	o					=SV==M01/2.8
strap clamp open/close	PE			+L10-X16	PE	PE	o					=SV==M01/4.8

10 12

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==M01+P01-X16		= SV==AUSW		+ P01		
			editor	Lo Grasso	Berliner Straße 51-55								
			check.	26.11.13	58332 Schwelm		VS11-S		T13079			Sh.	11
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers				35	Sh.

BI_A3K2D

terminal diagram

terminal strip designation

=SV==N01+P01-X13

function text	cable name	typ	target destination	connection	terminal number	jumper	connection name	target destination	connection	typ	cable name	page/path
emergency stop in the control desk			-S11	11	1	o		=SV==X01-X23	5		X	=SV==N01/1.1
-			-S11	12	2							=SV==N01/1.2
reverse emergency stop					3							=SV==N01/1.3
-					4			=SV==X01-X23	6			=SV==N01/1.4
emergency stop in the control desk			-S11	21	5	o		=SV==X01-X23	7		X	=SV==N01/1.1
-			-S11	22	6							=SV==N01/1.2
reverse emergency stop					7							=SV==N01/1.3
-					8			=SV==X01-X23	8			=SV==N01/1.4
emergency stop in the control desk			-S11	31	9			=SV==G01-X64	P1.4			=SV==N01/1.1
reverse emergency stop					10							=SV==N01/1.3
emergency stop in the control desk			-S11	32	11	o		=SV==K01-A22	18			=SV==N01/1.2
reverse emergency stop					12	o		=SV==K01-A22	19			=SV==N01/1.4
-					13	o						=SV==N01/1.4
-					14	o						=SV==N01/1.4
-					PE	o						=SV==N01/1.5

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13

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==N01+P01-X13	= SV==AUSW	+ P01	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 12
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		35 Sh.

BI_A3K2D

terminal diagram

terminal strip designation

=SV==X01+P01-X23

function text	=SV==X01+P01-W11 cable name	ÖLFLEX typ	target destination	connection	terminal number	jumper	connection name	target destination	connection	cable name typ	page/path
emergency stop of the customer	1		+LK23-X23	1	1	o		=SV==N01-K32	S11		=SV==X01/1.1
-	2		+LK23-X23	2	2	o		=SV==N01-K32	S12		=SV==X01/1.1
-	3		+LK23-X23	3	3	o		=SV==N01-K32	S21		=SV==X01/1.2
-	4		+LK23-X23	4	4	o		=SV==N01-K32	S22		=SV==X01/1.2
emergency stop to the customer	5		+LK23-X23	5	5	o		=SV==N01-X13	1	X	=SV==X01/1.4
-	6		+LK23-X23	6	6	o		=SV==N01-X13	4		=SV==X01/1.4
-	7		+LK23-X23	7	7	o		=SV==N01-X13	5	X	=SV==X01/1.5
-	8		+LK23-X23	8	8	o		=SV==N01-X13	8		=SV==X01/1.5
-	9		+LK23-X23	9	9	o					=SV==X01/1.5
-	10		+LK23-X23	10	10	o					=SV==X01/1.5
reserve wire	11		+LK23-X23	11	11	o					=SV==X01/1.6
emergency stop of the customer					PE	o					=SV==X01/1.2
reserve wire	PE		+LK23-X23	PE	PE	o					=SV==X01/1.6

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==X01+P01-X23	= SV==AUSW	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 13
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers		35 Sh.

BI_A3K2D

terminal diagram

terminal strip designation

=SV==X02+P01-X24

function text	=SV==X02+P01-W11 ÖLFLEX	cable name typ	target destination	connection	terminal number	jumper	connection name	target destination	connection	cable name typ	page/path
safety door contacts on site	1		+LK24-X24	1	1	o		=SV==N02-K32	S11		=SV==X02/1.1
-	2		+LK24-X24	2	2	o		=SV==N02-K32	S12		=SV==X02/1.1
-	3		+LK24-X24	3	3	o		=SV==N02-K32	S21		=SV==X02/1.2
-	4		+LK24-X24	4	4	o		=SV==N02-K32	S22		=SV==X02/1.2
safety door contact to customer	5		+LK24-X24	5	5	o		=SV==N02-K32	34		=SV==X02/1.4
-	6		+LK24-X24	6	6	o		=SV==N02-K32	33		=SV==X02/1.4
-	7		+LK24-X24	7	7	o					=SV==X02/1.5
-	8		+LK24-X24	8	8	o					=SV==X02/1.5
-	9		+LK24-X24	9	9	o					=SV==X02/1.5
-	10		+LK24-X24	10	10	o		=SV==M01-K16	14		=SV==X02/1.5
-	11		+LK24-X24	11	11	o		=SV==M01-K16	11		=SV==X02/1.6
safety door contacts on site					PE	o					=SV==X02/1.2
safety door contact to customer	PE		+LK24-X24	PE	PE	o					=SV==X02/1.6

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15

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==X02+P01-X24	= SV==AUSW	+ P01	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 14
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		35 Sh.

BI_A3KZD

terminal diagram

terminal strip designation

=SV==X03+P01-X25

function text	=SV==X03+P01-W11 ÖLFLEX	cable name typ	target destination	connection	terminal number	jumper	connection name	target destination	connection	cable name typ					page/path
	1		+LK25-X2	1	1	o		=SV==G01-X54	P1.5		X				=SV==X03/1.1
signal exchange box transport	2		+LK25-X2	2	2	o		=SV==K01-A26	2			X			=SV==X03/1.1
Signal exchange box position 1	3		+LK25-X2	3	3	o		=SV==K01-A26	3			X			=SV==X03/1.2
Signal exchange box position 2	4		+LK25-X2	4	4	o		=SV==K01-A26	4			X			=SV==X03/1.3
signal exchange start	5		+LK25-X2	5	5	o		=SV==K01-A26	5			X			=SV==X03/1.4
signal exchange door Is opened	6		+LK25-X2	6	6	o		=SV==K01-A26	6			X			=SV==X03/1.5
signal exchange door Is closed	7		+LK25-X2	7	7	o		=SV==K01-A26	7			X			=SV==X03/1.6
signal exchange reserve	8		+LK25-X2	8	8	o		=SV==K01-A26	8			X			=SV==X03/1.7
-	9		+LK25-X2	9	9	o		=SV==K01-A26	9			X			=SV==X03/1.8
-	10		+LK25-X2	10	10	o									=SV==X03/1.9
-	11		+LK25-X2	11	11	o									=SV==X03/1.9
-	PE		+LK25-X2	PE	PE	o									=SV==X03/1.9

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==X03+P01-X25	=SV==AUSW	+P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 15
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		35 Sh.

BI_A3K2D

terminal diagram

terminal strip designation

=SV==X03+P01-X26

function text	=SV==X03+P01-H20	cable name	target destination	connection	terminal number	jumper	connection name	target destination	connection	typ	cable name	page/path
	ÖLFLEX	typ										
	1		+LK25-3X1	0/51	1	o		=SV==M01-K81	11		X	=SV==X03/2.0
signal exchange strapping machine	2		+LK25-3X1	52	2	o		=SV==M01-K81	14		X	=SV==X03/2.1
signal exchange strapping machine	3		+LK25-3X1	54	3	o		=SV==M01-K82	14		X	=SV==X03/2.2
signal exchange strapping machine	4		+LK25-3X1	56	4	o		=SV==M01-K83	14		X	=SV==X03/2.3
signal exchange strapping machine	5		+LK25-3X1	58	5	o		=SV==M01-K84	14		X	=SV==X03/2.4
signal exchange strapping machine	6		+LK25-3X1	60	6	o		=SV==M01-K85	14		X	=SV==X03/2.5
signal exchange strapping machine	7		+LK25-3X1	62	7	o		=SV==M01-K86	14		X	=SV==X03/2.6
signal exchange strapping machine	8		+LK25-3X1	64	8	o		=SV==M01-K87	14		X	=SV==X03/2.7
-	9		+LK25-3X1	66	9	o		=SV==M01-K88	14		X	=SV==X03/2.8
-	PE		+LK25-3X1	PE	PE	o	PE					=SV==X03/2.8

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			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==X03+P01-X26	= SV==AUSW	+ P01	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 16
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		35 Sh.

BI_A3S2D

cable overview

cable name cable designation	source by	target to	cable type	total cores	used cores	cross-section mm²	m	remark	graphics - page
=SV==D01+P01-W11	=SV==D01-X1	=SV==D01-X11	ÖLFLEX	4/PE	4/PE	2.5	-		/18
=SV==D02+P01-W11	=SV==D02-X3	=SV==D02+L10-X3	ÖLFLEX	4/PE	4/PE	1.5	-		/19
=SV==F01+P01-W24	=SV==F01-X11	=SV==F01-M17	ÖLFLEX	3/PE	3/PE	1.5	-		/20
=SV==G01+P01-W10	=SV==G01-X10	=SV==G01-X11	ÖLFLEX	3/PE	3/PE	1.5	-		/21
=SV==G01+P01-W12	=SV==G01-X10	=SV==G01-X12	ÖLFLEX	3/PE	3/PE	1.5	-		/22
=SV==K01+P01-W111	=SV==K01-X111	=SV==K01-X12	DP-Leitung (VT)	2+SH	2	0.64	-	internal	/23
=SV==L01+P01-W51	=SV==L01-X15	=SV==L01+L10-X15	ÖLFLEX	25/PE	25/PE	1.5	-		/24
=SV==L01+P01-W71			ÖLFLEX-FD 855P	36/PE	30/PE	1	-		/25
	=SV==L01-X15	=SV==L01+L10-X15		36/PE	15	1			/25
	=SV==M01-X16	=SV==M01+L10-X16		36/PE	15/PE	1			/25
=SV==M01+P01-W21			ÖLFLEX	18/PE	13/PE	1.5	-		/26
	=SV==M01-X16	=SV==M01+L10-X16		18/PE	11/PE	1.5			/26
	=SV==L01-X15	=SV==L01+L10-X15		18/PE	2	1.5			/26
=SV==G10+P01-W12	=SV==G01-X13	=SV==G10+L10-X13	ÖLFLEX	7/PE	7/PE	1.5	-		/27
=SV==X01+P01-W11	=SV==X01-X23	=SV==X01+LK23-X23	ÖLFLEX	12/PE	12/PE	1.5	-		/28
=SV==X02+P01-W11	=SV==X02-X24	=SV==X02+LK24-X24	ÖLFLEX	12/PE	12/PE	1.5	-		/29
=SV==X03+P01-W11	=SV==X03-X25	=SV==X03+LK25-X2	ÖLFLEX	12/PE	12/PE	1	-		/30
=SV==X03+P01-W20	=SV==X03-X26	=SV==X03+LK25-3X1	ÖLFLEX	12/PE	10/PE	1	-		/31

			date	26.08.13	Titan Umreifungstechnik	TITAN	cable overview	= SV==AUSW	+ P01	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 17
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		35 Sh.

BI_A3N1D

interconnection diagram

cable name =SV==D01+P01-W11		cable type ÖLFLEX	
remark		no. of cores 4/PE	cross-section 2.5	cable length –

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
	=SV==D01/1.1	=SV==D01-X1	1	1	=SV==D01-X11	L1	=SV==D01/1.1	customer pre-fuse for main power 20A
	=SV==D01/1.1	=SV==D01-X1	2	2	=SV==D01-X11	L2	=SV==D01/1.1	customer pre-fuse for main power 20A
	=SV==D01/1.1	=SV==D01-X1	3	3	=SV==D01-X11	L3	=SV==D01/1.1	customer pre-fuse for main power 20A
	=SV==D01/1.2	=SV==D01-X1	PE	PE	=SV==D01-X11	PE	=SV==D01/1.1	customer pre-fuse for main power 20A

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			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==D01+P01-W11	= SV==AUSW	+ P01	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 18
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			35 Sh.

BI_A3N1D

interconnection diagram

cable name	=SV==D02+P01-W11	cable type	ÖLFLEX		
remark		no. of cores	4/PE	cross-section	1.5

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
dispenser motor	=SV==D02/1.2	=SV==D02-X3	1	1	=SV==D02+L10-X3	1	=SV==D02/1.2	dispenser motor
dispenser motor	=SV==D02/1.2	=SV==D02-X3	2	2	=SV==D02+L10-X3	2	=SV==D02/1.2	dispenser motor
dispenser motor	=SV==D02/1.2	=SV==D02-X3	3	3	=SV==D02+L10-X3	3	=SV==D02/1.2	dispenser motor
dispenser motor	=SV==D02/1.2	=SV==D02-X3	PE	PE	=SV==D02+L10-X3	PE	=SV==D02/1.2	dispenser motor

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			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==D02+P01-W11	= SV==AUSW	+ P01	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 19
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		35 Sh.

BI_A3N1D

interconnection diagram

cable name	=SV==F01+P01-W24	cable type	ÖLFLEX		
remark		no. of cores	3/PE	cross-section	1.5	cable length	–

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
controller air conditioner	=SV==F01/1.7	=SV==F01-X11	5	1	=SV==F01-M17	L	=SV==F01/1.7	Cabinet socket outlet only
controller air conditioner	=SV==F01/1.7	=SV==F01-X11	8	2	=SV==F01-M17	N	=SV==F01/1.7	Cabinet socket outlet only
controller air conditioner	=SV==F01/1.8	=SV==F01-X11	PE	PE	=SV==F01-M17	PE	=SV==F01/1.7	Cabinet socket outlet only

			date	26.08.13	Titan Umreifungstechnik	TITANO	=SV==F01+P01-W24	= SV==AUSW	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 20
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		35 Sh.

BI_A3N10

interconnection diagram

cable name =SV==G01+P01-W10		cable type ÖLFLEX	
remark		no. of cores 3/PE	cross-section 1.5	cable length –

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
external power supply 230V ac	=SV==G01/1.1	=SV==G01-X10	1	1	=SV==G01-X11	1	=SV==G01/1.1	external supply up fuse On site
external power supply 230V ac	=SV==G01/1.1	=SV==G01-X10	2	2	=SV==G01-X11	2	=SV==G01/1.1	external supply up fuse On site
external power supply 230V ac	=SV==G01/1.1	=SV==G01-X10	PE	PE	=SV==G01-X11	PE	=SV==G01/1.1	external supply up fuse On site

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==G01+P01-W10	= SV==AUSW	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 21
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers		35 Sh.

BI_A3N1D

interconnection diagram

cable name	=SV==G01+P01-W12	cable type	ÖLFLEX		
remark		no. of cores	3/PE	cross-section	1.5	cable length	–

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
external power supply 230V ac	=SV==G01/1.3	=SV==G01-X10	3	1	=SV==G01-X12	1	=SV==G01/1.2	external supply up fuse On site
external power supply 230V ac	=SV==G01/1.3	=SV==G01-X10	4	2	=SV==G01-X12	2	=SV==G01/1.2	external supply up fuse On site
external power supply 230V ac	=SV==G01/1.3	=SV==G01-X10	PE	PE	=SV==G01-X12	PE	=SV==G01/1.2	external supply up fuse On site

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change	date	name	standa	date	editor	check.	origin	replace for	replace through
			VDE 0100	26.08.13	Lo Grasso	26.11.13			

Titan Umreifungstechnik
Berliner Straße 51-55
58332 Schwelm

TITAN

=SV==G01+P01-W12
VS11-S
Möllers

= SV==AUSW
+ P01
T13079

Sh. 22
35 Sh.

BI_A3N1D

interconnection diagram

cable name =SV==K01+P01-W111		cable type DP-Leitung (VT)	
remark internal		no. of cores 2+SH	cross-section 0.64	cable length –

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
	=SV==K01/11.1	=SV==K01-X111	B1	RD	=SV==K01-X12	B2	=SV==K01/1.3	
	=SV==K01/11.1	=SV==K01-X111	A1	GN	=SV==K01-X12	A2	=SV==K01/1.3	
				SH				

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			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==K01+P01-W111	= SV==AUSW	+ P01		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 23	
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			35 Sh.

BI_A3N1D

interconnection diagram

cable name	=SV==LO1+PO1-W51	cable type	ÖLFLEX		
remark		no. of cores	25/PE	cross-section	1.5

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
strapping head home position	=SV==LO1/5.1	=SV==LO1-X15	27	1	=SV==LO1+L10-X15	41	=SV==LO1/5.1	strapping head home position
strapping head home position	=SV==LO1/5.2	=SV==LO1-X15	28	2	=SV==LO1+L10-X15	42	=SV==LO1/5.2	strapping head home position
Strapping unit to the package	=SV==LO1/5.3	=SV==LO1-X15	29	3	=SV==LO1+L10-X15	43	=SV==LO1/5.3	Strapping unit to the package
reserve	=SV==LO1/5.4	=SV==LO1-X15	30	4	=SV==LO1+L10-X15	44	=SV==LO1/5.4	reserve
Retractable Rear Channel home position	=SV==LO1/5.5	=SV==LO1-X15	31	5	=SV==LO1+L10-X15	45	=SV==LO1/5.5	Retractable Rear Channel home position
Retractable Rear Channel home position	=SV==LO1/5.6	=SV==LO1-X15	32	6	=SV==LO1+L10-X15	46	=SV==LO1/5.6	Retractable Rear Channel home position
Retractable channel closed	=SV==LO1/5.7	=SV==LO1-X15	33	7	=SV==LO1+L10-X15	47	=SV==LO1/5.7	Retractable channel closed
reserve	=SV==LO1/5.8	=SV==LO1-X15	34	8	=SV==LO1+L10-X15	48	=SV==LO1/5.8	reserve
Locking pin strapping aggregate in	=SV==LO1/6.1	=SV==LO1-X15	35	9	=SV==LO1+L10-X15	49	=SV==LO1/6.1	Locking pin strapping aggregate in
reserve	=SV==LO1/6.2	=SV==LO1-X15	36	10	=SV==LO1+L10-X15	50	=SV==LO1/6.2	reserve
reserve	=SV==LO1/6.3	=SV==LO1-X15	37	11	=SV==LO1+L10-X15	51	=SV==LO1/6.3	reserve
Main stop valve pressure switch	=SV==LO1/6.4	=SV==LO1-X15	38	12	=SV==LO1+L10-X15	52	=SV==LO1/6.4	Main stop valve pressure switch
VS11 unit pressure switch pressure air	=SV==LO1/6.5	=SV==LO1-X15	39	13	=SV==LO1+L10-X15	53	=SV==LO1/6.5	VS11 unit pressure switch pressure air
reserve	=SV==LO1/6.6	=SV==LO1-X15	40	14	=SV==LO1+L10-X15	54	=SV==LO1/6.6	reserve
reserve	=SV==LO1/6.7	=SV==LO1-X15	41	15	=SV==LO1+L10-X15	55	=SV==LO1/6.7	reserve
reserve	=SV==LO1/6.8	=SV==LO1-X15	42	16	=SV==LO1+L10-X15	56	=SV==LO1/6.8	reserve
reserve	=SV==LO1/10.2	=SV==LO1-X15	54	17	=SV==LO1+L10-X15	68	=SV==LO1/10.2	reserve
strap accumulator full	=SV==LO1/10.3	=SV==LO1-X15	55	18	=SV==LO1+L10-X15	69	=SV==LO1/10.3	strap accumulator full
strap accumulator empty	=SV==LO1/10.4	=SV==LO1-X15	56	19	=SV==LO1+L10-X15	70	=SV==LO1/10.4	strap accumulator empty
strap accumulator end	=SV==LO1/10.5	=SV==LO1-X15	57	20	=SV==LO1+L10-X15	71	=SV==LO1/10.5	strap accumulator end
fill strap accumulator	=SV==LO1/10.6	=SV==LO1-X15	58	21	=SV==LO1+L10-X15	72	=SV==LO1/10.6	fill strap accumulator
strap accumulator reserve	=SV==LO1/10.7	=SV==LO1-X15	59	22	=SV==LO1+L10-X15	73	=SV==LO1/10.7	strap accumulator reserve
strap accumulator strap low	=SV==LO1/10.8	=SV==LO1-X15	60	23	=SV==LO1+L10-X15	74	=SV==LO1/10.8	strap accumulator strap low
strap accumulator strap low	=SV==LO1/10.8	=SV==LO1-X15	61	24	=SV==LO1+L10-X15	75	=SV==LO1/10.8	strap accumulator strap low
reserve	=SV==LO1/6.8	=SV==LO1-X15	PE	PE	=SV==LO1+L10-X15	PE	=SV==LO1/6.4	Main stop valve pressure switch

			date	26.08.13	Titan Umreifungstechnik	TITANO	=SV==LO1+PO1-W51	= SV==AUSW	+ PO1		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 24	
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			35 Sh.

BI_A3N1D

interconnection diagram

cable name	=SV==LO1+PO1-W71	cable type	ÖLFLEX-FD 855P		
remark		no. of cores	36/PE	cross-section	1	cable length	–

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
VS11L strap stop switch B1	=SV==LO1/7.1	=SV==LO1-X15	1	1	=SV==LO1+L10-X15	37	=SV==LO1/7.1	VS11L strap stop switch B1
VS11L strap stop switch B1	=SV==LO1/7.1	=SV==LO1-X15	5	2	=SV==LO1+L10-X15	38	=SV==LO1/7.1	VS11L strap stop switch B1
VS11L air valve middle Y1	=SV==MO1/1.1	=SV==MO1-X16	32	3	=SV==MO1+L10-X16	9	=SV==MO1/1.1	VS11L air valve middle Y1
VS11L strap stop switch B1	=SV==LO1/7.1	=SV==LO1-X15	43	4	=SV==LO1+L10-X15	57	=SV==LO1/7.1	VS11L strap stop switch B1
VS11L counter switch B2	=SV==LO1/7.2	=SV==LO1-X15	44	5	=SV==LO1+L10-X15	58	=SV==LO1/7.2	VS11L counter switch B2
VS11L O-position B3	=SV==LO1/7.3	=SV==LO1-X15	45	6	=SV==LO1+L10-X15	59	=SV==LO1/7.3	VS11L O-position B3
VS11L clamp position B4	=SV==LO1/7.4	=SV==LO1-X15	46	7	=SV==LO1+L10-X15	60	=SV==LO1/7.4	VS11L clamp position B4
VS11-L safety switch flap open	=SV==LO1/7.5	=SV==LO1-X15	47	8	=SV==LO1+L10-X15	61	=SV==LO1/7.5	VS11-L safety switch flap open
VS11L head before package B7	=SV==LO1/7.6	=SV==LO1-X15	48	9	=SV==LO1+L10-X15	62	=SV==LO1/7.6	VS11L head before package B7
VS11L head on package B8	=SV==LO1/7.7	=SV==LO1-X15	49	10	=SV==LO1+L10-X15	63	=SV==LO1/7.7	VS11L head on package B8
VS11-L service - switch insert strap	=SV==LO1/7.8	=SV==LO1-X15	50	11	=SV==LO1+L10-X15	64	=SV==LO1/7.8	VS11-L service - switch insert strap
VS11L service - switch sealing B10	=SV==LO1/8.1	=SV==LO1-X15	51	12	=SV==LO1+L10-X15	65	=SV==LO1/8.1	VS11L service - switch sealing B10
VS11L reserve	=SV==LO1/8.2	=SV==LO1-X15	52	13	=SV==LO1+L10-X15	66	=SV==LO1/8.2	VS11L reserve
VS11L reserve	=SV==LO1/8.3	=SV==LO1-X15	53	14	=SV==LO1+L10-X15	67	=SV==LO1/8.3	VS11L reserve
				15				
				16				
VS11L air valve middle Y1	=SV==MO1/1.1	=SV==MO1-X16	1	17	=SV==MO1+L10-X16	11	=SV==MO1/1.1	VS11L air valve middle Y1
VS11L air valve quick Y2	=SV==MO1/1.2	=SV==MO1-X16	2	18	=SV==MO1+L10-X16	12	=SV==MO1/1.2	VS11L air valve quick Y2
VS11L transport motor forward Y3	=SV==MO1/1.3	=SV==MO1-X16	3	19	=SV==MO1+L10-X16	13	=SV==MO1/1.3	VS11L transport motor forward Y3
VS11L transport motor backward Y4	=SV==MO1/1.4	=SV==MO1-X16	4	20	=SV==MO1+L10-X16	14	=SV==MO1/1.4	VS11L transport motor backward Y4
VS11L sealing motor Y5	=SV==MO1/1.5	=SV==MO1-X16	5	21	=SV==MO1+L10-X16	15	=SV==MO1/1.5	VS11L sealing motor Y5
VS11L tensioning motor Y6	=SV==MO1/1.6	=SV==MO1-X16	6	22	=SV==MO1+L10-X16	16	=SV==MO1/1.6	VS11L tensioning motor Y6
VS11L transport slide Y7	=SV==MO1/1.7	=SV==MO1-X16	7	23	=SV==MO1+L10-X16	17	=SV==MO1/1.7	VS11L transport slide Y7
VS11L straightening device Y8	=SV==MO1/1.8	=SV==MO1-X16	8	24	=SV==MO1+L10-X16	18	=SV==MO1/1.8	VS11L straightening device Y8
VS11L strap stop cylinder Y9	=SV==MO1/2.1	=SV==MO1-X16	9	25	=SV==MO1+L10-X16	19	=SV==MO1/2.1	VS11L strap stop cylinder Y9
VS11L tensioning slide pressed Y16	=SV==MO1/2.2	=SV==MO1-X16	10	26	=SV==MO1+L10-X16	20	=SV==MO1/2.2	VS11L tensioning slide pressed Y16
VS11L open flap Y17	=SV==MO1/2.3	=SV==MO1-X16	11	27	=SV==MO1+L10-X16	21	=SV==MO1/2.3	VS11L open flap Y17
VS11L close flap Y18	=SV==MO1/2.4	=SV==MO1-X16	12	28	=SV==MO1+L10-X16	22	=SV==MO1/2.4	VS11L close flap Y18
				29				
VS11L reserve	=SV==MO1/2.6	=SV==MO1-X16	33	30	=SV==MO1+L10-X16	23	=SV==MO1/2.6	VS11L reserve
VS11L counter switch B2	=SV==LO1/7.2	=SV==LO1-X15	9	31	=SV==LO1+L10-X15	39	=SV==LO1/7.2	VS11L counter switch B2
VS11L counter switch B2	=SV==LO1/7.2	=SV==LO1-X15	10	32	=SV==LO1+L10-X15	40	=SV==LO1/7.2	VS11L counter switch B2
				33				
				34				
				35				
VS11L reserve	=SV==MO1/2.8	=SV==MO1-X16	PE	PE	=SV==MO1+L10-X16	PE	=SV==MO1/2.8	VS11L reserve

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==LO1+PO1-W71	= SV==AUSW	+ PO1	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 25
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		35 Sh.

BI_A3N1D

interconnection diagram

cable name	=SV==M01+P01-W21	cable type	ÖLFLEX		
remark		no. of cores	18/PE	cross-section	1.5

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
compressed air main valve	=SV==M01/4.1	=SV==M01-X16	17	1	=SV==M01+L10-X16	24	=SV==M01/4.1	compressed air main valve
strapping head ago	=SV==M01/4.2	=SV==M01-X16	18	2	=SV==M01+L10-X16	25	=SV==M01/4.2	strapping head ago
Strapping unit back	=SV==M01/4.3	=SV==M01-X16	19	3	=SV==M01+L10-X16	26	=SV==M01/4.3	Strapping unit back
Retractable channel before	=SV==M01/4.4	=SV==M01-X16	20	4	=SV==M01+L10-X16	27	=SV==M01/4.4	Retractable channel before
Retractable channel back	=SV==M01/4.5	=SV==M01-X16	21	5	=SV==M01+L10-X16	28	=SV==M01/4.5	Retractable channel back
reserve	=SV==M01/4.6	=SV==M01-X16	22	6	=SV==M01+L10-X16	29	=SV==M01/4.6	reserve
VS11 strapping head	=SV==M01/4.7	=SV==M01-X16	23	7	=SV==M01+L10-X16	30	=SV==M01/4.7	VS11 strapping head
strap clamp open/close	=SV==M01/4.8	=SV==M01-X16	24	8	=SV==M01+L10-X16	31	=SV==M01/4.8	strap clamp open/close
reserve	=SV==M01/5.7	=SV==M01-X16	30	9	=SV==M01+L10-X16	32	=SV==M01/5.7	reserve
machine in home position	=SV==X03/3.1	=SV==L01-X15	62	10	=SV==L01+L10-X15	76	=SV==X03/3.1	machine in home position
machine in home position	=SV==X03/3.4	=SV==L01-X15	63	11	=SV==L01+L10-X15	79	=SV==X03/3.4	machine in home position
reserve	=SV==M01/5.8	=SV==M01-X16	31	12	=SV==M01+L10-X16	33	=SV==M01/5.8	reserve
				13				
				14				
				15				
				16				
				17				
strap clamp open/close	=SV==M01/4.8	=SV==M01-X16	PE	PE	=SV==M01+L10-X16	PE	=SV==M01/2.8	VS11L reserve

25

27

change	date	name						
			standa	VDE 0100	origin	replace for	replace through	
			check.	26.11.13	Titan Umreifungstechnik			
			editor	Lo Grasso	Berliner Straße 51-55			
			date	26.08.13	58332 Schwelm			

TITAN

=SV==M01+P01-W21	= SV==AUSW	+P01
VS11-S	T13079	Sh. 26
Möllers		35 Sh.

BI_A3N1D

interconnection diagram

cable name	=SV==G10+P01-W12	cable type	ÖLFLEX		
remark		no. of cores	7/PE	cross-section	1.5

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
machine power supply 24V dc emergency stop voltage	=SV==G01/8.1	=SV==G01-X13	1	1	=SV==G10+L10-X13	1	=SV==G10+L10/1.1	machine power supply 24V dc emergency stop vo
machine power supply 24V dc emergency stop voltage	=SV==G01/8.2	=SV==G01-X13	2	2	=SV==G10+L10-X13	3	=SV==G10+L10/1.2	machine power supply 24V dc emergency stop vo
machine power supply 24V dc safety door voltage	=SV==G01/8.3	=SV==G01-X13	3	3	=SV==G10+L10-X13	5	=SV==G10+L10/1.3	machine power supply 24V dc safety door volta
machine power supply 24V dc safety door voltage	=SV==G01/8.4	=SV==G01-X13	4	4	=SV==G10+L10-X13	7	=SV==G10+L10/1.4	machine power supply 24V dc safety door volta
machine power supply 24V dc	=SV==G01/8.5	=SV==G01-X13	5	5	=SV==G10+L10-X13	9	=SV==G10+L10/1.5	machine power supply 24V dc
machine power supply 24V dc	=SV==G01/8.6	=SV==G01-X13	6	6	=SV==G10+L10-X13	13	=SV==G10+L10/1.6	machine power supply 24V dc
machine power supply 24V dc	=SV==G01/8.7	=SV==G01-X13	PE	PE	=SV==G10+L10-X13	PE	=SV==G10+L10/1.7	machine power supply 24V dc

change	date	name	standa	VDE 0100	origin	replace for	replace through
			date	26.08.13	Titan Umreifungstechnik		
			editor	Lo Grasso	Berliner Straße 51-55		
			check.	26.11.13	58332 Schwelm		

TITAN

=SV==G10+P01-W12	= SV==AUSW	+ P01
VS11-S	T13079	Sh. 27
Möllers		35 Sh.

interconnection diagram

BI_A3N1D

cable name =SV==X01+P01-W11		cable type ÖLFLEX	
remark		no. of cores 12/PE	cross-section 1.5 / cable length –

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
emergency stop of the customer	=SV==X01/1.1	=SV==X01-X23	1	1	=SV==X01+LK23-X23	1		
emergency stop of the customer	=SV==X01/1.1	=SV==X01-X23	2	2	=SV==X01+LK23-X23	2		
emergency stop of the customer	=SV==X01/1.2	=SV==X01-X23	3	3	=SV==X01+LK23-X23	3		
emergency stop of the customer	=SV==X01/1.2	=SV==X01-X23	4	4	=SV==X01+LK23-X23	4		
emergency stop to the customer	=SV==X01/1.4	=SV==X01-X23	5	5	=SV==X01+LK23-X23	5		
emergency stop to the customer	=SV==X01/1.4	=SV==X01-X23	6	6	=SV==X01+LK23-X23	6		
emergency stop to the customer	=SV==X01/1.5	=SV==X01-X23	7	7	=SV==X01+LK23-X23	7		
emergency stop to the customer	=SV==X01/1.5	=SV==X01-X23	8	8	=SV==X01+LK23-X23	8		
emergency stop to the customer	=SV==X01/1.5	=SV==X01-X23	9	9	=SV==X01+LK23-X23	9		
emergency stop to the customer	=SV==X01/1.5	=SV==X01-X23	10	10	=SV==X01+LK23-X23	10		
reserve wire	=SV==X01/1.6	=SV==X01-X23	11	11	=SV==X01+LK23-X23	11		
reserve wire	=SV==X01/1.6	=SV==X01-X23	PE	PE	=SV==X01+LK23-X23	PE		

change	date	name	standa					
			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==X01+P01-W11	=SV==AUSW / +P01
			editor	Lo Grasso	Berliner Straße 51-55			
			check.	26.11.13	58332 Schwelm		VS11-S	T13079
			VDE 0100	origin	replace for	replace through	Möllers	Sh. 28 / 35 Sh.

BI_A3N1D

interconnection diagram

cable name	=SV==XO2+PO1-W11	cable type	ÖLFLEX		
remark		no. of cores	12/PE	cross-section	1.5

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
safety door contacts on site	=SV==XO2/1.1	=SV==XO2-X24	1	1	=SV==XO2+LK24-X24	1		
safety door contacts on site	=SV==XO2/1.1	=SV==XO2-X24	2	2	=SV==XO2+LK24-X24	2		
safety door contacts on site	=SV==XO2/1.2	=SV==XO2-X24	3	3	=SV==XO2+LK24-X24	3		
safety door contacts on site	=SV==XO2/1.2	=SV==XO2-X24	4	4	=SV==XO2+LK24-X24	4		
safety door contact to customer	=SV==XO2/1.4	=SV==XO2-X24	5	5	=SV==XO2+LK24-X24	5		
safety door contact to customer	=SV==XO2/1.4	=SV==XO2-X24	6	6	=SV==XO2+LK24-X24	6		
safety door contact to customer	=SV==XO2/1.5	=SV==XO2-X24	7	7	=SV==XO2+LK24-X24	7		
safety door contact to customer	=SV==XO2/1.5	=SV==XO2-X24	8	8	=SV==XO2+LK24-X24	8		
safety door contact to customer	=SV==XO2/1.5	=SV==XO2-X24	9	9	=SV==XO2+LK24-X24	9		
safety door contact to customer	=SV==XO2/1.5	=SV==XO2-X24	10	10	=SV==XO2+LK24-X24	10		
safety door contact to customer	=SV==XO2/1.6	=SV==XO2-X24	11	11	=SV==XO2+LK24-X24	11		
safety door contact to customer	=SV==XO2/1.6	=SV==XO2-X24	PE	PE	=SV==XO2+LK24-X24	PE		

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==XO2+PO1-W11	= SV==AUSW	+ PO1
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 29
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		35 Sh.

interconnection diagram

BI_A3N1D

cable name	=SV==X03+P01-W11	cable type	ÖLFLEX		
remark		no. of cores	12/PE	cross-section	1	cable length	–

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
	=SV==X03/1.1	=SV==X03-X25	1	1	=SV==X03+LK25-X2	1		
signal exchange box transport	=SV==X03/1.1	=SV==X03-X25	2	2	=SV==X03+LK25-X2	2		
Signal exchange box position 1	=SV==X03/1.2	=SV==X03-X25	3	3	=SV==X03+LK25-X2	3		
Signal exchange box position 2	=SV==X03/1.3	=SV==X03-X25	4	4	=SV==X03+LK25-X2	4		
Signal exchange start strapping machine	=SV==X03/1.4	=SV==X03-X25	5	5	=SV==X03+LK25-X2	5		
signal exchange door Is opened	=SV==X03/1.5	=SV==X03-X25	6	6	=SV==X03+LK25-X2	6		
signal exchange door Is closed	=SV==X03/1.6	=SV==X03-X25	7	7	=SV==X03+LK25-X2	7		
signal exchange reserve	=SV==X03/1.7	=SV==X03-X25	8	8	=SV==X03+LK25-X2	8		
signal exchange reserve	=SV==X03/1.8	=SV==X03-X25	9	9	=SV==X03+LK25-X2	9		
signal exchange reserve	=SV==X03/1.9	=SV==X03-X25	10	10	=SV==X03+LK25-X2	10		
signal exchange reserve	=SV==X03/1.9	=SV==X03-X25	11	11	=SV==X03+LK25-X2	11		
signal exchange reserve	=SV==X03/1.9	=SV==X03-X25	PE	PE	=SV==X03+LK25-X2	PE		

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change	date	name	standa						
			date	26.08.13	Titan Umreifungstechnik	TITANO	=SV==X03+P01-W11	= SV==AUSW	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 30
			VDE 0100		origin	replace for	replace through	Möllers	35 Sh.

BI_A3N1D

interconnection diagram

cable name	=SV==X03+P01-W20	cable type	ÖLFLEX		
remark		no. of cores	12/PE	cross-section	1	cable length	–

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
	=SV==X03/2.0	=SV==X03-X26	1	1	=SV==X03+LK25-3X1	51		
signal exchange strapping machine	=SV==X03/2.1	=SV==X03-X26	2	2	=SV==X03+LK25-3X1	52		
signal exchange strapping machine	=SV==X03/2.2	=SV==X03-X26	3	3	=SV==X03+LK25-3X1	54		
signal exchange strapping machine	=SV==X03/2.3	=SV==X03-X26	4	4	=SV==X03+LK25-3X1	56		
signal exchange strapping machine	=SV==X03/2.4	=SV==X03-X26	5	5	=SV==X03+LK25-3X1	58		
signal exchange strapping machine	=SV==X03/2.5	=SV==X03-X26	6	6	=SV==X03+LK25-3X1	60		
signal exchange strapping machine	=SV==X03/2.6	=SV==X03-X26	7	7	=SV==X03+LK25-3X1	62		
signal exchange strapping machine	=SV==X03/2.7	=SV==X03-X26	8	8	=SV==X03+LK25-3X1	64		
signal exchange strapping machine	=SV==X03/2.8	=SV==X03-X26	9	9	=SV==X03+LK25-3X1	66		
				10				
				11				
signal exchange strapping machine	=SV==X03/2.8	=SV==X03-X26	PE	PE	=SV==X03+LK25-3X1	PE		

change	date	name	standa					
			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==X03+P01-W20	= SV==AUSW	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 31
			VDE 0100	origin	replace for	replace through	Möllers		35 Sh.

parts list

pos.	designation	amount	designation		order number	function text
51	=SV==D01+P01-Q11	1	main switch 3pols	IU=25, P/AC-23A at	08211000171	main switch
52	=SV==D01+P01-Q15	1	circuit breaker size S0	range 14...20A	08872000051	
53	=SV==D02+P01-Q12	1	circuit breaker size S00	range 0,9...1,25A	08872000049	dispenser motor protector 1
54	=SV==D0KU+P01	1	control desk 1200x960x400	RAL 7035	08849904099	
55	=SV==D0KU+P01	1	base height 200mm	for TP6742 front and back	08849906016	
56	=SV==D0KU+P01	1	base screen	for TP674 x lateral, height=200mm	08849906009	
57	=SV==D0KU+P01	4	bottom plate depth 100mm	for TP6742	08849907027	
58	=SV==D0KU+P01	1	profil f. cable entry back	for TP6742	08849907107	
59	=SV==D0KU+P01	1	support strip for the inner level	for TP 1200 mm wide	08849906503	
60	=SV==D0KU+P01	2	assembly web	for 600 door	08849903857	
61	=SV==D0KU+P01	2	dummy plug round	accessories for 3SB3, 22,5 mm	08878017050	
62	=SV==F01+P01-E16	1	cabinet lighting	240V / 14W	08849903819	
63	=SV==F01+P01-F11	1	FI-safetyswitch Typ A	30mA, 25A, 1P+N un..	08211000174	
64	=SV==F01+P01-F11	1	auxiliary switch AS	for FI 5SM3, 1S + 1Ö	08805001012	
65	=SV==F01+P01-F15	1	line safety switch B10	B10A, 2pol.	08211000097	use cabinet plug only for laptop
66	=SV==F01+P01-F15	1	auxiliary switch	1S+1Ö for circuit breaker	08211000148	use cabinet plug only for laptop
67	=SV==F01+P01-F18	1	line safety switch		08211000214	
68	=SV==F01+P01-F18	1	auxiliary switch	1S+1Ö for circuit breaker	08211000148	
69	=SV==F01+P01-M17	1	wall mounting cooling device	230V AC / 500W cooling power	08849905336	
70	=SV==F01+P01-M17	0	door limit switch	including installation accessories	08849904069	
71	=SV==F01+P01-M17	1	Universal angle		08849903853	
72	=SV==F01+P01-Q11	1	circuit breaker size S00	range 4,5...6,3A	08872000033	Motor Protection Transformer 480V/230V
73	=SV==F01+P01-S16	1	door limit switch	m. 600 mm	08849903800	
74	=SV==F01+P01-S18	1	door limit switch	including installation accessories	08849904069	
75	=SV==F01+P01-T11	1	transformer	Pri.550-208V Sec: 2 x 115V	08700000097	2x115V 1600VA control transformer
76	=SV==F01+P01-X15	1	socket 230V/16	rail mounting TS35, gray	08810200020	use cabinet plug only for laptop
77	=SV==G01+P01-A22	1	redundancy module	IN: 24V DC, 2 x 20A	08140000300	redundancy module
78	=SV==G01+P01-F1.11	1	4 chanel fuse module	24VDC OUT: 24V/4-6-8-10ADC	08770000125	load current monitoring
79	=SV==G01+P01-F14	1	line safety switch C6	C6A, 2pol.	08211000180	Power supply 24V DC Power supply unit redundancy 1
80	=SV==G01+P01-F14	1	auxiliary switch	1S+1Ö for circuit breaker	08211000148	Power supply 24V DC Power supply unit redundancy 1
81	=SV==G01+P01-F16	1	line safety switch C6	C6A, 2pol.	08211000180	Power supply 24V DC Power supply unit redundancy 2
82	=SV==G01+P01-F16	1	auxiliary switch	1S+1Ö for circuit breaker	08211000148	Power supply 24V DC Power supply unit redundancy 2
83	=SV==G01+P01-F22	1	safty module-2-channel	24VDC OUT: 24 V/4-6-8-10ADC	08770000127	load current monitoring
84	=SV==G01+P01-G1.11	1	direct current supply	SITOP PSU100M	08140000233	
85	=SV==G01+P01-G14	1	SITOP direct current supply	input: ac 120/230-500V	08140000115	

			date	26.08.13	Titan Umreifungstechnik	TITAN	parts list	= SV==AUSW	+ P01	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 32
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		35 Sh.

BI_A302D_PRO

parts list

pos.	designation	amount	designation		order number	function text
86	=SV==G01+P01-G16	1	SITOP direct current supply	input: ac 120/230-500V	08140000115	
87	=SV==G01+P01-X34	1	potential interface.	2x8 potential terminal 250 V	08140000521	
88	=SV==G01+P01-X44	1	potential interface.	2x8 potential terminal 250 V	08140000521	
89	=SV==G01+P01-X54	1	potential interface.	2x16 potential terminal 250 V	08140000523	
90	=SV==G01+P01-X64	1	potential interface.	2x12 potential terminal 250 V	08140000522	
91	=SV==G01+P01-X74	1	potential interface.	2x8 potential terminal 250 V	08140000521	
92	=SV==K01+P01-A12	1	Simatic S7-300 CPU315-2DP	plc	08140000136	
93	=SV==K01+P01-A12	1	Simatic S7, Micro Memory Card	CPU 3,3 V NFLASH, 128 KBYTE	08140000053	
94	=SV==K01+P01-A13	1	communications processor	CP343-1 LEAN	08140000079	
95	=SV==K01+P01-A14	1	communications processor	CP343-1 LEAN	08140000079	
96	=SV==K01+P01-A16	1	simatic s7-300 digital output SM	16DI and 16DO, DC	08140000078	
97	=SV==K01+P01-A16	1	simatic s7-300 front plug 40 pole	with srew connexion	08140000088	
98	=SV==K01+P01-A22	1	simatic s7-300 digital input SM	32DI, DC24V	08140000076	
99	=SV==K01+P01-A22	1	simatic s7-300 front plug 40 pole	with srew connexion	08140000088	
100	=SV==K01+P01-A23	1	simatic s7-300 digital input SM	32DI, DC24V	08140000076	
101	=SV==K01+P01-A23	1	simatic s7-300 front plug 40 pole	with srew connexion	08140000088	
102	=SV==K01+P01-A24	1	simatic s7-300 digital output SM	32DO, DC24V, 0,5A	08140000077	
103	=SV==K01+P01-A24	1	simatic s7-300 front plug 40 pole	with srew connexion	08140000088	
104	=SV==K01+P01-A25	1	SIMATIC S7-300, counter module.	500kHz 1 channel,	08140000220	
105	=SV==K01+P01-A25	1	Simatic S7-300, front plug 20 pole	with srew connexion	08140000087	
106	=SV==K01+P01-A26	1	Simatic S7-300, digital module.	pot. sep. 8DI and 8DO, DC 24V,	08140000084	
107	=SV==K01+P01-A26	1	Simatic S7-300, front plug 20 pole	with srew connexion	08140000087	
108	=SV==K01+P01-A111	1	OP177B DP blue mode stn-display	buttons, MPI-connection, printer	08140000066	
109	=SV==K01+P01-X12	1	Simatic DP, conector	cable outlet at 90 degrees	08140000055	bus connector on the CPU
110	=SV==K01+P01-X111	1	Simatic DP, conector	connection plug axially without PG socket	08140000135	Bus connector on the touch panel
111	=SV==L01+P01-S91	1	push-button actuator gn	iluminated push-button with holder	08875000040	control on
112	=SV==L01+P01-S91	1	auxiliary switch, base mounting, 1pole, 1no	screw connection,	08332300740	control on
113	=SV==L01+P01-S91	1	sign holder 27x 18	VE= 25 Stck.	08840003297	control on
114	=SV==L01+P01-S91	1	green LED lamp holder	screwed connection	08332400029	control on
115	=SV==L01+P01-S92	1	actuator	pushbutton, rd, flat	08875000061	control off
116	=SV==L01+P01-S92	1	auxiliary switch, base mounting, 1pole, 1nc	screw connection,	08332300741	control off
117	=SV==L01+P01-S92	1	sign holder 27x 18	VE= 25 Stck.	08840003297	control off
118	=SV==L01+P01-S93	1	metal, actuator round	iluminated push-button with holder	08332300701	manual mode
119	=SV==L01+P01-S93	1	auxiliary switch, base mounting, 1pole, 1no	screw connection,	08332300740	manual mode
120	=SV==L01+P01-S93	1	sign holder 27x 18	VE= 25 Stck.	08840003297	manual mode

			date	26.08.13	Titan Umreifungstechnik	TITAN	parts list	= SV==AUSW	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 33
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers		35 Sh.

parts list

pos.	designation	amount	designation		order number	function text
121	=SV==L01+P01-S93	1	white LED lamp holder	screwed connection	08332400028	manual mode
122	=SV==L01+P01-S94	1	push-button actuator gn	iluminated push-button with holder	08875000040	automatic
123	=SV==L01+P01-S94	1	auxiliary switch, base mounting, 1pole, 1no	screw connection,	08332300740	automatic
124	=SV==L01+P01-S94	1	sign holder 27x 18	VE= 25 Stck.	08840003297	automatic
125	=SV==L01+P01-S94	1	green LED lamp holder	screwed connection	08332400029	automatic
126	=SV==L01+P01-S95	1	push-button actuator gn	iluminated push-button with holder	08875000040	cycle start
127	=SV==L01+P01-S95	1	auxiliary switch, base mounting, 1pole, 1no	screw connection,	08332300740	cycle start
128	=SV==L01+P01-S95	1	sign holder 27x 18	VE= 25 Stck.	08840003297	cycle start
129	=SV==L01+P01-S95	1	green LED lamp holder	screwed connection	08332400029	cycle start
130	=SV==L01+P01-S96	1	actuator	pushbutton, rd, flat	08875000061	cycle stop
131	=SV==L01+P01-S96	1	auxiliary switch, base mounting, 1pole, 1nc	screw connection,	08332300741	cycle stop
132	=SV==L01+P01-S96	1	sign holder 27x 18	VE= 25 Stck.	08840003297	cycle stop
133	=SV==L01+P01-S97	1	metal, actuator round	iluminated push-button with holder	08332300716	fault acknowledge
134	=SV==L01+P01-S97	1	auxiliary switch, base mounting, 1pole, 1no	screw connection,	08332300740	fault acknowledge
135	=SV==L01+P01-S97	1	sign holder 27x 18	VE= 25 Stck.	08840003297	fault acknowledge
136	=SV==L01+P01-S97	1	red LED lamp holder	screwed connection	08332400026	fault acknowledge
137	=SV==L01+P01-S98	1	metal, actuator round	iluminated push-button with holder	08332300701	drive to home position
138	=SV==L01+P01-S98	1	auxiliary switch, base mounting, 1pole, 1no	screw connection,	08332300740	drive to home position
139	=SV==L01+P01-S98	1	sign holder 27x 18	VE= 25 Stck.	08840003297	drive to home position
140	=SV==L01+P01-S98	1	white LED lamp holder	screwed connection	08332400028	drive to home position
141	=SV==L01+P01-S101	1	push-button actuator ye	iluminated push-button with holder	08875000050	release transport
142	=SV==L01+P01-S101	1	auxiliary switch, base mounting, 1pole, 1no	screw connection,	08332300740	release transport
143	=SV==L01+P01-S101	1	sign holder 27x 18	VE= 25 Stck.	08840003297	release transport
144	=SV==L01+P01-S101	1	yellow LED lamp holder	screwed connection	08332400027	release transport
145	=SV==M01+P01-A38	1	impulse counter type SK 07.1 - 24 V DC	1.132.101.03	08230245014	
146	=SV==M01+P01-K16	1	relais	with EMR and srew terminals	08260000005	safety door open
147	=SV==M01+P01-K51	1	motor contactor, 3kW,1 NC	400V, 3-pole, 24V DC	08871066151	dispenser contactor
148	=SV==M01+P01-K51	1	screen diode, dc 12-250V	size 00, AC3	08871066160	dispenser contactor
149	=SV==M01+P01-K52	1	motor contactor, 3kW,1 NC	400V, 3-pole, 24V DC	08871066151	dispenser contactor
150	=SV==M01+P01-K52	1	screen diode, dc 12-250V	size 00, AC3	08871066160	dispenser contactor
151	=SV==M01+P01-K81	1	relais	with EMR and srew terminals	08260000005	Signal exchange strapping machine Ready
152	=SV==M01+P01-K82	1	relais	with EMR and srew terminals	08260000005	Signal exchange strapping machine disorder
153	=SV==M01+P01-K83	1	relais	with EMR and srew terminals	08260000005	Signal exchange strapping machine takeover ready
154	=SV==M01+P01-K84	1	relais	with EMR and srew terminals	08260000005	Signal exchange strapping machine takeover ready
155	=SV==M01+P01-K85	1	relais	with EMR and srew terminals	08260000005	Signal exchange strapping machine empty message Magazine

			date	26.08.13	Titan Umreifungstechnik	TITAN	parts list	= SV==AUSW	+ P01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 34
change	date	name	standa	VDE 0100	origin / replace for / replace through		Möllers		35 Sh.

BI_A3DZD_PRO

parts list

pos.	designation	amount	designation		order number	function text
156	=SV==M01+P01-K86	1	relais	with EMR and srew terminals	08260000005	signal exchange strapping machine release doors Open
157	=SV==M01+P01-K87	1	relais	with EMR and srew terminals	08260000005	signal exchange strapping machine reserve
158	=SV==M01+P01-K88	1	relais	with EMR and srew terminals	08260000005	signal exchange strapping machine reserve
159	=SV==N01+P01-K32	1	safety relay component	safety module 24V DC/3S+1Ö	08300003030	
160	=SV==N01+P01-K42	1	24V DC	4no+2nc	08300003031	emergency stop extension module 1
161	=SV==N01+P01-S11	1	Mushroom pushbutton black 40 mm	20mm, round, latching	08332300812	emergency stop in the control desk
162	=SV==N01+P01-S11	3	auxiliary switch safety	yellow, with supervision contcts	08332300773	emergency stop in the control desk
163	=SV==N01+P01-S11	1	accessories for 3SB3 protection collar yellow	accessories protection collar	08332300732	emergency stop in the control desk
164	=SV==N01+P01-S33	1	metal, actuator round	iluminated push-button with holder	08332300716	
165	=SV==N01+P01-S33	1	auxiliary switch, base mounting, 1pole, 1no	screw connection,	08332300740	
166	=SV==N01+P01-S33	1	sign holder 27x 18	VE= 25 Stck.	08840003297	
167	=SV==N01+P01-S33	1	red LED lamp holder	screwed connection	08332400026	
168	=SV==N02+P01-K32	1	safety relay component	safety module 24V DC/3S+1Ö	08300003030	
169	=SV==N02+P01-K42	1	24V DC	4no+2nc	08300003031	

			date	26.08.13	Titan Umreifungstechnik		parts list	= SV==AUSW	+ P01
			editor	Lo Grasso	Berliner Straße 51-55	TITAN			
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 35
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers		35 Sh.

BI_A3R1D

terminal strip and connector overview

terminal strip and connector designation	text of the strip definition	terminals / connectors					graphic page of the terminal strip
		first	last	amount PE	amount N	totally amount	
=SV==D02+L01-X3		1	PE	1	0	4	=SV==AUSW+L01/2
=SV==L01+L01-X15		1	PE	1	0	15	=SV==AUSW+L01/3

			date	26.08.13	Titan Umreifungstechnik	TITAN	terminal strip and connector overview	= SV==AUSW	+L01	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 1
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers			10 Sh.

BI_A3K2D

terminal diagram

terminal strip designation

=SV==D02+L01-X3

function text	=SV==D02+L01-W11 ÖLFLEX	cable name typ	target destination	connection	terminal number	jumper	connection name	target destination	connection	cable name typ	=SV==D02+L10-W11 ÖLFLEX	page/path
dispenser motor	1		-M12	U	1	o		+L10-X3	1		1	=SV==D02+P01/1.2
-	2		-M12	V	2	o		+L10-X3	2		2	=SV==D02+P01/1.2
-	3		-M12	W	3	o		+L10-X3	3		3	=SV==D02+P01/1.2
-	PE		-M12	PE	PE	o	PE	+L10-X3	PE		PE	=SV==D02+P01/1.2

1 3

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==D02+L01-X3	= SV==AUSW	+ L01				
			editor	Lo Grasso	Berliner Straße 51-55								
			check.	26.11.13	58332 Schwelm		VS11-S	T13079				Sh. 2	
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers					10 Sh.

BI_A3K2D

terminal diagram

terminal strip designation

=SV==L01+L01-X15

function text	=SV==L01+L01-W108	=SV==L01+L01-W105	=SV==L01+L01-W104	=SV==L01+L01-W103	cable name	typ	target destination	connection	terminal number	jumper	connection name	target destination	connection	typ	cable name	=SV==D02+L10-W11	=SV==L01+L01-W108	page/path
	PUR	PUR	PUR	PUR												ÖLFLEX	PUR	
strap accumulator full				BN			-B103	1	1			+L10-X15	16			4		=SV==L01+P01/10.3
strap accumulator empty			BN				-B104	1	2									=SV==L01+P01/10.4
strap accumulator end		BN					-B105	1	3									=SV==L01+P01/10.5
fill strap accumulator							-S106	13	4			-B108	1				BN	=SV==L01+P01/10.6
strap accumulator full				BU			-B103	3	5			+L10-X15	34			5		=SV==L01+P01/10.3
strap accumulator empty			BU				-B104	3	6									=SV==L01+P01/10.4
strap accumulator end		BU					-B105	3	7									=SV==L01+P01/10.5
fill strap accumulator									8			-B108	3				BU	=SV==L01+P01/10.6
strap accumulator full				BK			-B103	4	9	o	E11.2	+L10-X15	69			6		=SV==L01+P01/10.3
strap accumulator empty			BK				-B104	4	10	o	E11.3	+L10-X15	70			7		=SV==L01+P01/10.4
strap accumulator end		BK					-B105	4	11	o	E11.4	+L10-X15	71			8		=SV==L01+P01/10.5
fill strap accumulator							-S106	14	12	o	E11.5	+L10-X15	72			9		=SV==L01+P01/10.6
strap accumulator reserve									13	o	E11.6	+L10-X15	73			10		=SV==L01+P01/10.7
strap accumulator strap low	BK						-B108	4	14	o	E11.7	+L10-X15	74			11		=SV==L01+P01/10.8
-									PE	o								=SV==L01+P01/10.8

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			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==L01+L01-X15	=SV==AUSW / +L01
			editor	Lo Grasso	Berliner Straße 51-55			
			check.	26.11.13	58332 Schwelm		VS11-S	T13079 / Sh. 3 / 10 Sh.
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers	

cable overview

cable name	source	target		total	used	cross-section			graphics -
cable designation	by	to	cable type	cores	cores	mm²	m	remark	page
=SV==D02+L01-W11	=SV==D02-X3	=SV==D02-M12	ÖLFLEX	4/PE	4/PE	1.5	-		/5
=SV==L01+L01-W103	=SV==L01-X15	=SV==L01-B103	PUR	3	3	0.5	-		/6
=SV==L01+L01-W104	=SV==L01-X15	=SV==L01-B104	PUR	3	3	0.5	-		/7
=SV==L01+L01-W105	=SV==L01-X15	=SV==L01-B105	PUR	3	3	0.5	-		/8
=SV==L01+L01-W108	=SV==L01-X15	=SV==L01-B108	PUR	3	3	0.5	-		/9

change	date	name	standa					
			date	26.08.13	Titan Umreifungstechnik	origin	replace for	replace through
			editor	Lo Grasso	Berliner Straße 51-55			
			check.	26.11.13	58332 Schwelm			
			VDE 0100					

TITAN

cable overview

VS11-S

Möllers

= SV==AUSW

+ L01

T13079

Sh. 4

10 Sh.

0	1	2	3	4	5	6	7	8	9

interconnection diagram

BI_A3N1D

cable name	=SV==D02+L01-W11	cable type	ÖLFLEX		
remark		no. of cores	4/PE	cross-section	1.5	cable length	-

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
dispenser motor	=SV==D02+P01/1.2	=SV==D02-X3	1	1	=SV==D02-M12	U	=SV==D02+P01/1.2	dispenser motor
dispenser motor	=SV==D02+P01/1.2	=SV==D02-X3	2	2	=SV==D02-M12	V	=SV==D02+P01/1.2	dispenser motor
dispenser motor	=SV==D02+P01/1.2	=SV==D02-X3	3	3	=SV==D02-M12	W	=SV==D02+P01/1.2	dispenser motor
dispenser motor	=SV==D02+P01/1.2	=SV==D02-X3	PE	PE	=SV==D02-M12	PE	=SV==D02+P01/1.2	dispenser motor

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change	date	name	standa						
			date	26.08.13	Titan Umreifungstechnik	origin		=SV==D02+L01-W11	= SV==AUSW	+L01
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm	replace for	replace through	VS11-S	T13079	Sh. 5
			VDE 0100					Möllers		10 Sh.

BI_A3N1D

interconnection diagram

cable name	=SV==L01+L01-W103	cable type	PUR		
remark		no. of cores	3	cross-section	0.5	cable length	–

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
strap accumulator full	=SV==L01+P01/10.3	=SV==L01-X15	1	BN	=SV==L01-B103	1	=SV==L01+P01/10.3	strap accumulator full
strap accumulator full	=SV==L01+P01/10.3	=SV==L01-X15	5	BU	=SV==L01-B103	3	=SV==L01+P01/10.3	strap accumulator full
strap accumulator full	=SV==L01+P01/10.3	=SV==L01-X15	9	BK	=SV==L01-B103	4	=SV==L01+P01/10.3	strap accumulator full

5 7

change	date	name	standa						
			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==L01+L01-W103	= SV==AUSW	+L01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 6
					origin	replace for	replace through	Möllers		10 Sh.

interconnection diagram

BI_A3N1D

cable name =SV==L01+L01-W104		cable type PUR	
remark		no. of cores 3	cross-section 0.5 / cable length –

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
strap accumulator empty	=SV==L01+P01/10.4	=SV==L01-X15	2	BN	=SV==L01-B104	1	=SV==L01+P01/10.4	strap accumulator empty
strap accumulator empty	=SV==L01+P01/10.4	=SV==L01-X15	6	BU	=SV==L01-B104	3	=SV==L01+P01/10.4	strap accumulator empty
strap accumulator empty	=SV==L01+P01/10.4	=SV==L01-X15	10	BK	=SV==L01-B104	4	=SV==L01+P01/10.4	strap accumulator empty

6

8

change	date	name	standa					
			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==L01+L01-W104	= SV==AUSW / + L01
			editor	Lo Grasso	Berliner Straße 51-55			
			check.	26.11.13	58332 Schwelm		VS11-S	T13079 / Sh. 7 / 10 Sh.
			standa	VDE 0100	origin / replace for / replace through		Möllers	

BI_A3N1D

interconnection diagram

cable name	=SV==L01+L01-W105	cable type	PUR		
remark		no. of cores	3	cross-section	0.5	cable length	–

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
strap accumulator end	=SV==L01+P01/10.5	=SV==L01-X15	3	BN	=SV==L01-B105	1	=SV==L01+P01/10.5	strap accumulator end
strap accumulator end	=SV==L01+P01/10.5	=SV==L01-X15	7	BU	=SV==L01-B105	3	=SV==L01+P01/10.5	strap accumulator end
strap accumulator end	=SV==L01+P01/10.5	=SV==L01-X15	11	BK	=SV==L01-B105	4	=SV==L01+P01/10.5	strap accumulator end

7 9

change	date	name							
			date	26.08.13	Titan Umreifungstechnik		=SV==L01+L01-W105	= SV==AUSW	+L01
			editor	Lo Grasso	Berliner Straße 51-55	TITAN			
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 8
			standa	VDE 0100	origin	replace for	replace through	Möllers		10 Sh.

interconnection diagram

BI_A3N1D

cable name =SV==L01+L01-W108		cable type PUR	
remark		no. of cores 3	cross-section 0.5 / cable length –

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
fill strap accumulator	=SV==L01+P01/10.6	=SV==L01-X15	4	BN	=SV==L01-B108	1	=SV==L01+P01/10.8	strap accumulator strap low
fill strap accumulator	=SV==L01+P01/10.6	=SV==L01-X15	8	BU	=SV==L01-B108	3	=SV==L01+P01/10.8	strap accumulator strap low
strap accumulator strap low	=SV==L01+P01/10.8	=SV==L01-X15	14	BK	=SV==L01-B108	4	=SV==L01+P01/10.8	strap accumulator strap low

8

10

change	date	name	standa					
			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==L01+L01-W108	= SV==AUSW / +L01
			editor	Lo Grasso	Berliner Straße 51-55			
			check.	26.11.13	58332 Schwelm		VS11-S	T13079 / Sh. 9 / 10 Sh.
			VDE 0100	origin	replace for	replace through	Möllers	

BI_A3D2D_PRO

parts list

pos.	designation	amount	designation		order number	function text
1	=SV==D02+L01-M12	1	mechanical component	look at mechanic part list		dispenser motor
2	=SV==L01+L01-B103	1	accumulator	look at strap accumulator replacement part	list	strap accumulator full
3	=SV==L01+L01-B104	1	accumulator	look at strap accumulator replacement part	list	strap accumulator empty
4	=SV==L01+L01-B105	1	accumulator	look at strap accumulator replacement part	list	strap accumulator end
5	=SV==L01+L01-B108	1	accumulator	look at strap accumulator replacement part	list	strap accumulator strap low
6	=SV==L01+L01-S106	1	actuator	pushbutton, bk, flat	08875000030	fill strap accumulator
7	=SV==L01+L01-S106	1	auxiliary switch, base mounting, 1pole, 1no	screw connection,	08332300740	fill strap accumulator
8	=SV==L01+L01-S106	1	sign holder 27x 18	VE= 25 Stck.	08840003297	fill strap accumulator

			date	26.08.13	Titan Umreifungstechnik	TITAN	parts list	= SV==AUSW	+L01
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 10
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers		10 Sh.

BI_A3R1D

terminal strip and connector overview

terminal strip and connector designation	text of the strip definition	terminals / connectors					graphic page of the terminal strip
		first	last	amount PE	amount N	totally amount	
=SV==D02+L10-X3		1	PE	1	0	4	=SV==AUSW+L10/2
=SV==L01+L10-X15		1	PE	7	0	87	=SV==AUSW+L10/3
=SV==M01+L10-X16		1	PE	2	0	36	=SV==AUSW+L10/7
=SV==G10+L10-X13		1	PE	2	0	18	=SV==AUSW+L10/9

+L01/10

			date	26.08.13	Titan Umreifungstechnik	TITAN	terminal strip and connector overview	= SV==AUSW	+L10
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 1
change	date	name	standa	VDE 0100	origin / replace for / replace through		Möllers		29 Sh.

BI_A3K2D

terminal diagram

function text	=SV==D02+L10-W11 ÖLFLEX	cable name typ	terminal strip designation =SV==D02+L10-X3 target destination	connection	terminal number	jumper	connection name	target destination	connection	cable name typ	=SV==D02+P01-W11 ÖLFLEX	page/path
dispenser motor	1		+L01-X3	1	1	o		+P01-X3	1		1	=SV==D02+P01/1.2
-	2		+L01-X3	2	2	o		+P01-X3	2		2	=SV==D02+P01/1.2
-	3		+L01-X3	3	3	o		+P01-X3	3		3	=SV==D02+P01/1.2
-	PE		+L01-X3	PE	PE	o	PE	+P01-X3	PE		PE	=SV==D02+P01/1.2

1 3

change	date	name	standa					
			date	26.08.13				
			editor	Lo Grasso				
			check.	26.11.13				
			VDE 0100		origin	replace for	replace through	

Titan Umreifungstechnik
Berliner Straße 51-55
58332 Schwelm

TITAN

=SV==D02+L10-X3

VS11-S

Möllers

= SV==AUSW | +L10

T13079

Sh. 2
29 Sh.

BI_A3K2D

terminal diagram

terminal strip designation

=SV==L01+L10-X15

function text	=SV==L01+L10-W76	=SV==L01+L10-W65	=SV==L01+L10-W64	=SV==L01+L10-W61	=SV==L01+L10-W57	=SV==L01+L10-W55	=SV==L01+L10-W53	=SV==L01+L10-W51	cable name	target destination	connection	terminal number	jumper	connection name	target destination	connection	cable name	page/path
	PUR	ÖLFLEX	ÖLFLEX	PUR	PUR	ÖLFLEX	PUR	ÖLFLEX	typ								typ	
strapping head home position								1		-S51	13	1			=SV==G10-X13	9		=SV==L01+P01/5.1
-								3		-S51	21	2						=SV==L01+P01/5.2
Strapping unit to the package							BN			-B53	1	3						=SV==L01+P01/5.3
-												4						=SV==L01+P01/5.4
Retractable channel rear						1				-S55	13	5						=SV==L01+P01/5.5
-						3				-S55	21	6						=SV==L01+P01/5.6
Retractable channel closed					BN					-B57	1	7						=SV==L01+P01/5.7
-												8						=SV==L01+P01/5.8
Locking pin strapping aggregate in				BN						-B61	1	9						=SV==L01+P01/6.1
-												10						=SV==L01+P01/6.2
reserve												11						=SV==L01+P01/6.3
Main stop valve pressure switch			1							-S64	1	12						=SV==L01+P01/6.4
VS11 unit pressure switch		1								-S65	1	13						=SV==L01+P01/6.5
reserve												14						=SV==L01+P01/6.6
-	BN									-B76	1	15						=SV==L01+P01/6.7

2

4

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==L01+L10-X15	= SV==AUSW	+L10
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 3
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers		29 Sh.

BI_A3K2D

terminal diagram

terminal strip designation

=SV==L01+L10-X15

function text	=SV==L01+L10-W71 ÖLFLEX-FD 855P	=SV==L01+L10-W76 PUR	=SV==L01+L10-W65 ÖLFLEX	=SV==L01+L10-W64 ÖLFLEX	=SV==L01+L10-W61 PUR	=SV==L01+L10-W57 PUR	=SV==L01+L10-W53 PUR	=SV==D02+L10-W11 ÖLFLEX	cable name typ	target destination	connection	terminal number	jumper	connection name	target destination	connection	cable name typ	=SV==L01+P01-W71 ÖLFLEX-FD 855P	page/path
strap accumulator full								4		+L01-X15	1	16							=SV==L01+P01/10.3
strap accumulator empty				.								17							=SV==L01+P01/10.5
strap accumulator reserve												18							=SV==L01+P01/10.7
strapping head home position												19			=SV==G10-X13	13			=SV==L01+P01/5.1
-												20							=SV==L01+P01/5.2
Strapping unit to the package							BU			-B53	3	21							=SV==L01+P01/5.3
reserve												22							=SV==L01+P01/5.4
Retractable channel rear												23							=SV==L01+P01/5.5
-												24							=SV==L01+P01/5.6
Retractable channel closed						BU				-B57	3	25							=SV==L01+P01/5.7
reserve												26							=SV==L01+P01/5.8
Locking pin strapping aggregate in					BU					-B61	3	27							=SV==L01+P01/6.1
reserve												28							=SV==L01+P01/6.2
-												29							=SV==L01+P01/6.3
Main stop valve pressure switch				2						-S64	4	30							=SV==L01+P01/6.4
VS11 unit pressure switch			2							-S65	4	31							=SV==L01+P01/6.5
reserve												32							=SV==L01+P01/6.6
-		BU								-B76	3	33							=SV==L01+P01/6.7
strap accumulator full								5		+L01-X15	5	34							=SV==L01+P01/10.3
strap accumulator end												35							=SV==L01+P01/10.5
strap accumulator reserve												36							=SV==L01+P01/10.8
VS11L strap stop switch B1	1									+L18-XS1	A1	37	o		+P01-X15	1		1	=SV==L01+P01/7.1
-	2									+L18-XS1	A2	38	o		+P01-X15	5		2	=SV==L01+P01/7.1
VS11L counter switch B2	31									+L18-XS1	C2	39	o		+P01-X15	9		31	=SV==L01+P01/7.2
-	32									+L18-XS1	C3	40	o		+P01-X15	10		32	=SV==L01+P01/7.2

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==L01+L10-X15	=SV==AUSW	+L10
			editor	Lo Grasso	Berliner Straße 51-55		VS11-S	T13079	Sh. 4
			check.	26.11.13	58332 Schwelm				29 Sh.
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers	

terminal diagram

BI_A3K2D

function text	=SV==L01+L10-W71 ÖLFLEX-FD 855P	=SV==L01+L10-W65 ÖLFLEX	=SV==L01+L10-W64 ÖLFLEX	=SV==L01+L10-W61 PUR	=SV==L01+L10-W57 PUR	=SV==L01+L10-W55 ÖLFLEX	=SV==L01+L10-W53 PUR	=SV==L01+L10-W51 ÖLFLEX	cable name typ	terminal strip designation =SV==L01+L10-X15 target destination	connection	terminal number	jumper	connection name	target destination	connection	cable name typ	=SV==L01+P01-W51 ÖLFLEX	=SV==L01+P01-W71 ÖLFLEX-FD 855P			page/path
strapping head home position								2		-S51	14	41	o	E6.0	+P01-X15	27		1				=SV==L01+P01/5.1
-								4		-S51	22	42	o	E6.1	+P01-X15	28		2				=SV==L01+P01/5.2
Strapping unit to the package							BK			-B53	4	43	o	E6.2	+P01-X15	29		3				=SV==L01+P01/5.3
reserve												44	o	E6.3	+P01-X15	30		4				=SV==L01+P01/5.4
Retractable channel rear						2				-S55	14	45	o	E6.4	+P01-X15	31		5				=SV==L01+P01/5.5
-						4				-S55	22	46	o	E6.5	+P01-X15	32		6				=SV==L01+P01/5.6
Retractable channel closed					BK					-B57	4	47	o	E6.6	+P01-X15	33		7				=SV==L01+P01/5.7
reserve												48	o	E6.7	+P01-X15	34		8				=SV==L01+P01/5.8
Locking pin strapping aggregate in				BK						-B61	4	49	o	E7.0	+P01-X15	35		9				=SV==L01+P01/6.1
reserve												50	o	E7.1	+P01-X15	36		10				=SV==L01+P01/6.2
-												51	o	E7.2	+P01-X15	37		11				=SV==L01+P01/6.3
Main stop valve pressure switch			3							-S64	3	52	o	E7.3	+P01-X15	38		12				=SV==L01+P01/6.4
VS11 unit pressure switch		3								-S65	2	53	o	E7.4	+P01-X15	39		13				=SV==L01+P01/6.5
reserve												54	o	E7.5	+P01-X15	40		14				=SV==L01+P01/6.6
-												55	o	E7.6	+P01-X15	41		15				=SV==L01+P01/6.7
-												56	o	E7.7	+P01-X15	42		16				=SV==L01+P01/6.8
VS11L strap stop switch B1	4									+L18-XS1	B1	57	o	E8.0	+P01-X15	43			4			=SV==L01+P01/7.1
VS11L counter switch B2	5									+L18-XS1	B2	58	o		+P01-X15	44			5			=SV==L01+P01/7.2
VS11L O-position B3	6									+L18-XS1	B3	59	o	E8.2	+P01-X15	45			6			=SV==L01+P01/7.3
VS11L clamp position B4	7									+L18-XS1	B4	60	o	E8.3	+P01-X15	46			7			=SV==L01+P01/7.4
VS11L safety switch flap	8									+L18-XS1	C1	61	o	E8.4	+P01-X15	47			8			=SV==L01+P01/7.5

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==L01+L10-X15	= SV==AUSW	+ L10
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 5
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers		29 Sh.

BI_A3K2D

terminal diagram

terminal strip designation

=SV==L01+L10-X15

function text		=SV==L01+L10-W65	=SV==L01+L10-W64	=SV==H01+P01-W21	=SV==D02+L10-W11	=SV==L01+L10-W71	=SV==L01+L10-W77	=SV==L01+L10-W76	cable name	typ	target destination	connection	terminal number	jumper	connection name	target destination	connection	typ	cable name	=SV==L01+P01-W71	=SV==L01+P01-W51	=SV==L01+L10-W51	=SV==L01+L10-W55	page/path
		ÖLFLEX	ÖLFLEX	ÖLFLEX	ÖLFLEX	ÖLFLEX-FD 855P	PUR	PUR		typ	target destination	connection	terminal number	jumper	connection name	target destination	connection	typ	ÖLFLEX-FD 855P	ÖLFLEX	ÖLFLEX	ÖLFLEX	ÖLFLEX	page/path
VS11L head before package B7								BK			-B76	4	62	o	E8.5	+P01-X15	48		9					=SV==L01+P01/7.6
VS11L head on package B8							BK				-B77	4	63	o	E8.6	+P01-X15	49		10					=SV==L01+P01/7.7
VS11L service - switch strap						11					+L18-XS1	C4	64	o	E8.7	+P01-X15	50		11					=SV==L01+P01/7.8
VS11L service - switch sealing						12					+L18-XS1	D1	65	o	E9.0	+P01-X15	51		12					=SV==L01+P01/8.1
VS11L reserve						13					+L18-XS1	D2	66	o	E9.1	+P01-X15	52		13					=SV==L01+P01/8.2
-						14					+L18-XS1	D3	67	o	E9.2	+P01-X15	53		14					=SV==L01+P01/8.3
reserve													68	o	E11.1	+P01-X15	54			17				=SV==L01+P01/10.2
strap accumulator full					6						+L01-X15	9	69	o	E11.2	+P01-X15	55			18				=SV==L01+P01/10.3
strap accumulator empty					7						+L01-X15	10	70	o	E11.3	+P01-X15	56			19				=SV==L01+P01/10.4
strap accumulator end					8						+L01-X15	11	71	o	E11.4	+P01-X15	57			20				=SV==L01+P01/10.5
fill strap accumulator					9						+L01-X15	12	72	o	E11.5	+P01-X15	58			21				=SV==L01+P01/10.6
strap accumulator reserve					10						+L01-X15	13	73	o	E11.6	+P01-X15	59			22				=SV==L01+P01/10.7
strap accumulator strap low					11						+L01-X15	14	74	o	E11.7	+P01-X15	60			23				=SV==L01+P01/10.8
-													75	o		+P01-X15	61			24				=SV==L01+P01/10.8
machine in home position				10							+P01-X15	62	76	o		-S51	34					5		=SV==X03+P01/3.1
-													77			-S51	33					6		=SV==X03+P01/3.2
-													78			-S55	34						5	=SV==X03+P01/3.3
-				11							+P01-X15	63	79	o		-S55	33						6	=SV==X03+P01/3.4
-													80	o										=SV==X03+P01/3.4
Main stop valve pressure switch			PE								-S64	PE	PE	o										=SV==L01+P01/6.4
VS11 unit pressure switch		PE									-S65	PE	PE	o										=SV==L01+P01/6.5
reserve													PE	o		+P01-X15	PE			PE				=SV==L01+P01/6.8
strap accumulator strap low													PE	o										=SV==L01+P01/10.8
machine in home position													PE	o	.	.					PE			=SV==X03+P01/3.2
-													PE	o										=SV==X03+P01/3.3
-													PE	o	.	.							PE	=SV==X03+P01/3.4

5 7

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==L01+L10-X15	=SV==AUSW	+L10
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 6
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers	29 Sh.

terminal diagram

BI_A3K2D

function text	=SV==L01+L10-W71 ÖLFLEX-FD 855P	=SV==M01+L10-W48 ÖLFLEX	=SV==M01+L10-W47 ÖLFLEX	=SV==M01+L10-W45 ÖLFLEX	=SV==M01+L10-W44 ÖLFLEX	=SV==M01+L10-W43 ÖLFLEX	=SV==M01+L10-W42 ÖLFLEX	=SV==M01+L10-W41 ÖLFLEX	typ	cable name	terminal strip designation =SV==M01+L10-X16 target destination	connection	terminal number	jumper	connection name	target destination	connection	typ	cable name =SV==L01+P01-W71 ÖLFLEX-FD 855P	cable name =SV==M01+P01-W21 ÖLFLEX			page/path
compressed air main valve								2			-Y41	A2	1			=SV==G10-X13	7						=SV==M01+P01/4.1
strapping head ago							2				-Y42	A2	2										=SV==M01+P01/4.2
Strapping unit back						2					-Y43	A2	3										=SV==M01+P01/4.3
Retractable channel before					2						-Y44	A2	4										=SV==M01+P01/4.4
Retractable channel back				2							-Y45	A2	5										=SV==M01+P01/4.5
reserve													6										=SV==M01+P01/4.6
VS11 strapping head			2								-Y47	A2	7										=SV==M01+P01/4.7
strap clamp open/close		2									-Y48	A2	8										=SV==M01+P01/4.8
VS11L air valve middle Y1	3										=SV==L01+L18-XS1	A3	9	o		+P01-X16	32		3				=SV==M01+P01/1.1
reserve													10	o		=SV==G10-X13	3						=SV==M01+P01/5.7
VS11L air valve middle Y1	17										=SV==L01+L18-XS1	E1	11	o	A10.0	+P01-X16	1		17				=SV==M01+P01/1.1
VS11L air valve quick Y2	18										=SV==L01+L18-XS1	E2	12	o	A10.1	+P01-X16	2		18				=SV==M01+P01/1.2
VS11L transport motor forward Y3	19										=SV==L01+L18-XS1	E3	13	o	A10.2	+P01-X16	3		19				=SV==M01+P01/1.3
VS11L transport motor backward Y4	20										=SV==L01+L18-XS1	E4	14	o	A10.3	+P01-X16	4		20				=SV==M01+P01/1.4
VS11L sealing motor Y5	21										=SV==L01+L18-XS1	F1	15	o	A10.4	+P01-X16	5		21				=SV==M01+P01/1.5
VS11L tensioning motor Y6	22										=SV==L01+L18-XS1	F2	16	o	A10.5	+P01-X16	6		22				=SV==M01+P01/1.6
VS11L transport slide Y7	23										=SV==L01+L18-XS1	F3	17	o	A10.6	+P01-X16	7		23				=SV==M01+P01/1.7
VS11L straightening device Y8	24										=SV==L01+L18-XS1	F4	18	o	A10.7	+P01-X16	8		24				=SV==M01+P01/1.8
VS11L strap stop cylinder Y9	25										=SV==L01+L18-XS1	G1	19	o	A11.0	+P01-X16	9		25				=SV==M01+P01/2.1
VS11L tensioning slide pressed Y16	26										=SV==L01+L18-XS1	G2	20	o	A11.1	+P01-X16	10		26				=SV==M01+P01/2.2
VS11L open flap Y17	27										=SV==L01+L18-XS1	G3	21	o	A11.2	+P01-X16	11		27				=SV==M01+P01/2.3
VS11L close flap Y18	28										=SV==L01+L18-XS1	G4	22	o	A11.3	+P01-X16	12		28				=SV==M01+P01/2.4
VS11L reserve	30										=SV==L01+L18-XS1	A4	23	o		+P01-X16	33		30				=SV==M01+P01/2.6
compressed air main valve								1			-Y41	A1	24	o	A13.0	+P01-X16	17			1			=SV==M01+P01/4.1
strapping head ago							1				-Y42	A1	25	o	A13.1	+P01-X16	18			2			=SV==M01+P01/4.2
Strapping unit back						1					-Y43	A1	26	o	A13.2	+P01-X16	19			3			=SV==M01+P01/4.3
Retractable channel before					1						-Y44	A1	27	o	A13.3	+P01-X16	20			4			=SV==M01+P01/4.4
Retractable channel back				1							-Y45	A1	28	o	A13.4	+P01-X16	21			5			=SV==M01+P01/4.5
reserve													29	o	A13.5	+P01-X16	22			6			=SV==M01+P01/4.6
VS11 strapping head			1								-Y47	A1	30	o	A13.6	+P01-X16	23			7			=SV==M01+P01/4.7
strap clamp open/close		1									-Y48	A1	31	o	A13.7	+P01-X16	24			8			=SV==M01+P01/4.8
reserve													32	o	A14.6	+P01-X16	30			9			=SV==M01+P01/5.7

6 8

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==M01+L10-X16	= SV==AUSW / +L10
			editor	Lo Grasso	Berliner Straße 51-55			
			check.	26.11.13	58332 Schwelm		VS11-S	T13079 / Sh. 7 / 29 Sh.
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers	

BI_A3K20

terminal diagram

terminal strip designation

=SV==M01+L10-X16

function text	=SV==L01+L10-W71 ÖLFLEX-FD 855P	cable name typ	target destination	connection	terminal number	jumper	connection name	target destination	connection	cable name typ	=SV==M01+P01-W21 ÖLFLEX	=SV==L01+P01-W71 ÖLFLEX-FD 855P	page/path
reserve					33	o	A14.7	+P01-X16	31		12		=SV==M01+P01/5.8
-					34	o							=SV==M01+P01/5.8
VS11L reserve	PE		=SV==L01+L18-XS1	D4	PE	o		+P01-X16	PE			PE	=SV==M01+P01/2.8
strap clamp open/close					PE	o		+P01-X16	PE		PE		=SV==M01+P01/4.8

7 9

change	date	name	standa	date	editor	check.	origin	replace for	replace through
			VDE 0100	26.08.13	Lo Grasso	26.11.13			

Titan Umreifungstechnik
Berliner Straße 51-55
58332 Schwelm

TITAN

=SV==M01+L10-X16

VS11-S

Möllers

= SV==AUSW

+L10

T13079

Sh. 8
29 Sh.

terminal diagram

BI_A3K2D

terminal strip designation

=SV==G10+L10-X13

function text	cable name	typ	target destination	connection	terminal number	jumper	connection name	target destination	connection	typ	cable name =SV==G10+P01-W12	page/path
											ÖLFLEX	
machine power supply 24V dc emergency stop voltage					1			=SV==G01+P01-X13	1		1	=SV==G10/1.1
-					2							=SV==G10/1.1
-			=SV==M01-X16	10	3			=SV==G01+P01-X13	2		2	=SV==G10/1.2
-					4							=SV==G10/1.2
machine power supply 24V dc					5			=SV==G01+P01-X13	3		3	=SV==G10/1.3
-					6							=SV==G10/1.3
-			=SV==M01-X16	1	7			=SV==G01+P01-X13	4		4	=SV==G10/1.4
-					8							=SV==G10/1.4
machine power supply 24V dc			=SV==L01-X15	1	9			=SV==G01+P01-X13	5		5	=SV==G10/1.5
-					10							=SV==G10/1.5
-					11							=SV==G10/1.5
-					12							=SV==G10/1.6
-			=SV==L01-X15	19	13			=SV==G01+P01-X13	6		6	=SV==G10/1.6
-					14							=SV==G10/1.6
-					15							=SV==G10/1.6
-					16							=SV==G10/1.7
-					PE	o		=SV==G01+P01-X13	PE		PE	=SV==G10/1.7
-					PE	o						=SV==G10/1.7

8

10

			date	26.08.13	Titan Umreifungstechnik	TITANO	=SV==G10+L10-X13	= SV==AUSW	+ L10	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 9
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		29 Sh.

cable overview

cable name / cable designation	source / by	target / to	cable type	total cores	used cores	cross-section mm²	m	remark	graphics - page
=SV==D02+L10-W11			ÖLFLEX	12/PE	12/PE	1.5	-		/11
	=SV==D02+L01-X3	=SV==D02-X3		12/PE	4/PE	1.5			/11
	=SV==L01+L01-X15	=SV==L01-X15		12/PE	8	1.5			/11
=SV==L01+L10-W51			ÖLFLEX	7/PE	7/PE	1.5	-		/12
	=SV==L01-X15	=SV==L01-S51		7/PE	6	1.5			/12
	=SV==L01-X15	.		7/PE	1/PE	1.5			/12
=SV==L01+L10-W53	=SV==L01-X15	=SV==L01-B53	PUR	4	3	0.34	-		/13
=SV==L01+L10-W55			ÖLFLEX	7/PE	7/PE	1.5	-		/14
	=SV==L01-X15	=SV==L01-S55		7/PE	6	1.5			/14
	=SV==L01-X15	.		7/PE	1/PE	1.5			/14
=SV==L01+L10-W57	=SV==L01-X15	=SV==L01-B57	PUR	4	3	0.34	-		/15
=SV==L01+L10-W61	=SV==L01-X15	=SV==L01-B61	PUR	3	3	0.34	-		/16
=SV==L01+L10-W64	=SV==L01-X15	=SV==L01-S64	ÖLFLEX	4/PE	4/PE	0.5	-		/17
=SV==L01+L10-W65	=SV==L01-X15	=SV==L01-S65	ÖLFLEX	4/PE	4/PE	0.5	-		/18
=SV==L01+L10-W71			ÖLFLEX-FD 855P	36/PE	28/PE	1	-		/19
	=SV==L01-X15	=SV==L01+L18-XS1		36/PE	13	1			/19
	=SV==M01-X16	=SV==L01+L18-XS1		36/PE	15/PE	1			/19
=SV==L01+L10-W76	=SV==L01-X15	=SV==L01-B76	PUR	4	3	0.34	-		/20
=SV==L01+L10-W77	=SV==L01-X15	=SV==L01-B77	PUR	4	3	0.34	-		/21
=SV==M01+L10-W41	=SV==M01-X16	=SV==M01-Y41	ÖLFLEX	3/PE	2	0.75	-		/22
=SV==M01+L10-W42	=SV==M01-X16	=SV==M01-Y42	ÖLFLEX	3/PE	2	0.75	-		/23
=SV==M01+L10-W43	=SV==M01-X16	=SV==M01-Y43	ÖLFLEX	3/PE	2	0.75	-		/24
=SV==M01+L10-W44	=SV==M01-X16	=SV==M01-Y44	ÖLFLEX	3/PE	2	0.75	-		/25
=SV==M01+L10-W45	=SV==M01-X16	=SV==M01-Y45	ÖLFLEX	3/PE	2	0.75	-		/26
=SV==M01+L10-W47	=SV==M01-X16	=SV==M01-Y47	ÖLFLEX	3/PE	2	0.75	-		/27
=SV==M01+L10-W48	=SV==M01-X16	=SV==M01-Y48	ÖLFLEX	3/PE	2	0.75	-		/28

			date	26.08.13	Titan Umreifungstechnik	TITAN	cable overview	=SV==AUSW	+L10	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 10
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		29 Sh.

interconnection diagram

BI_A3N1D

cable name =SV==D02+L10-W11		cable type ÖLFLEX	
remark		no. of cores 12/PE	cross-section 1.5	cable length –

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
dispenser motor	=SV==D02+P01/1.2	=SV==D02+L01-X3	1	1	=SV==D02-X3	1	=SV==D02+P01/1.2	dispenser motor
dispenser motor	=SV==D02+P01/1.2	=SV==D02+L01-X3	2	2	=SV==D02-X3	2	=SV==D02+P01/1.2	dispenser motor
dispenser motor	=SV==D02+P01/1.2	=SV==D02+L01-X3	3	3	=SV==D02-X3	3	=SV==D02+P01/1.2	dispenser motor
strap accumulator full	=SV==L01+P01/10.3	=SV==L01+L01-X15	1	4	=SV==L01-X15	16	=SV==L01+P01/10.3	strap accumulator full
strap accumulator full	=SV==L01+P01/10.3	=SV==L01+L01-X15	5	5	=SV==L01-X15	34	=SV==L01+P01/10.3	strap accumulator full
strap accumulator full	=SV==L01+P01/10.3	=SV==L01+L01-X15	9	6	=SV==L01-X15	69	=SV==L01+P01/10.3	strap accumulator full
strap accumulator empty	=SV==L01+P01/10.4	=SV==L01+L01-X15	10	7	=SV==L01-X15	70	=SV==L01+P01/10.4	strap accumulator empty
strap accumulator end	=SV==L01+P01/10.5	=SV==L01+L01-X15	11	8	=SV==L01-X15	71	=SV==L01+P01/10.5	strap accumulator end
fill strap accumulator	=SV==L01+P01/10.6	=SV==L01+L01-X15	12	9	=SV==L01-X15	72	=SV==L01+P01/10.6	fill strap accumulator
strap accumulator reserve	=SV==L01+P01/10.7	=SV==L01+L01-X15	13	10	=SV==L01-X15	73	=SV==L01+P01/10.7	strap accumulator reserve
strap accumulator strap low	=SV==L01+P01/10.8	=SV==L01+L01-X15	14	11	=SV==L01-X15	74	=SV==L01+P01/10.8	strap accumulator strap low
dispenser motor	=SV==D02+P01/1.2	=SV==D02+L01-X3	PE	PE	=SV==D02-X3	PE	=SV==D02+P01/1.2	dispenser motor

10

12

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==D02+L10-W11	= SV==AUSW	+L10
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 11
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		29 Sh.

BI_A3N1D

interconnection diagram

cable name	=SV==L01+L10-W51	cable type	ÖLFLEX		
remark		no. of cores	7/PE	cross-section	1.5

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
strapping head home position	=SV==L01+P01/5.1	=SV==L01-X15	1	1	=SV==L01-S51	13	=SV==L01+P01/5.1	strapping head home position
strapping head home position	=SV==L01+P01/5.1	=SV==L01-X15	41	2	=SV==L01-S51	14	=SV==L01+P01/5.1	strapping head home position
strapping head home position	=SV==L01+P01/5.2	=SV==L01-X15	2	3	=SV==L01-S51	21	=SV==L01+P01/5.1	strapping head home position
strapping head home position	=SV==L01+P01/5.2	=SV==L01-X15	42	4	=SV==L01-S51	22	=SV==L01+P01/5.1	strapping head home position
machine in home position	=SV==X03+P01/3.1	=SV==L01-X15	76	5	=SV==L01-S51	34	=SV==L01+P01/5.1	strapping head home position
machine in home position	=SV==X03+P01/3.2	=SV==L01-X15	77	6	=SV==L01-S51	33	=SV==L01+P01/5.1	strapping head home position
machine in home position	=SV==X03+P01/3.2	=SV==L01-X15	PE	PE				

11

13

change	date	name							
			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==L01+L10-W51	= SV==AUSW	+ L10
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 12
			standa	VDE 0100	origin	replace for	replace through	Möllers	29 Sh.

BI_A3N1D

interconnection diagram

cable name =SV==L01+L10-W53		cable type PUR	
remark		no. of cores 4	cross-section 0.34	cable length –

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
Strapping unit to the package	=SV==L01+P01/5.3	=SV==L01-X15	3	BN	=SV==L01-B53	1	=SV==L01+P01/5.3	Strapping unit to the package
Strapping unit to the package	=SV==L01+P01/5.3	=SV==L01-X15	21	BU	=SV==L01-B53	3	=SV==L01+P01/5.3	Strapping unit to the package
				WH				
Strapping unit to the package	=SV==L01+P01/5.3	=SV==L01-X15	43	BK	=SV==L01-B53	4	=SV==L01+P01/5.3	Strapping unit to the package

12

14

change	date	name						
			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==L01+L10-W53	= SV==AUSW	+ L10
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 13
			standa	VDE 0100	origin	replace for	replace through	Möllers		29 Sh.

BI_A3N1D

interconnection diagram

cable name	=SV==L01+L10-W55	cable type	ÖLFLEX		
remark		no. of cores	7/PE	cross-section	1.5

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
Retractable Rear Channel home position	=SV==L01+P01/5.5	=SV==L01-X15	5	1	=SV==L01-S55	13	=SV==L01+P01/5.5	Retractable Rear Channel home position
Retractable Rear Channel home position	=SV==L01+P01/5.5	=SV==L01-X15	45	2	=SV==L01-S55	14	=SV==L01+P01/5.5	Retractable Rear Channel home position
Retractable Rear Channel home position	=SV==L01+P01/5.6	=SV==L01-X15	6	3	=SV==L01-S55	21	=SV==L01+P01/5.5	Retractable Rear Channel home position
Retractable Rear Channel home position	=SV==L01+P01/5.6	=SV==L01-X15	46	4	=SV==L01-S55	22	=SV==L01+P01/5.5	Retractable Rear Channel home position
machine in home position	=SV==X03+P01/3.3	=SV==L01-X15	78	5	=SV==L01-S55	34	=SV==L01+P01/5.5	Retractable Rear Channel home position
machine in home position	=SV==X03+P01/3.4	=SV==L01-X15	79	6	=SV==L01-S55	33	=SV==L01+P01/5.5	Retractable Rear Channel home position
machine in home position	=SV==X03+P01/3.4	=SV==L01-X15	PE	PE				

13

15

change	date	name	standa	VDE 0100	origin	replace for	replace through
			date	26.08.13	Titan Umreifungstechnik		
			editor	Lo Grasso	Berliner Straße 51-55		
			check.	26.11.13	58332 Schwelm		

TITAN

=SV==L01+L10-W55

VS11-S

Möllers

= SV==AUSW

+L10

T13079

Sh. 14

29 Sh.

BI_A3N10

interconnection diagram

cable name =SV==L01+L10-W57		cable type PUR	
remark		no. of cores 4	cross-section 0.34	cable length –

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
Retractable channel closed	=SV==L01+P01/5.7	=SV==L01-X15	7	BN	=SV==L01-B57	1	=SV==L01+P01/5.7	Retractable channel closed
Retractable channel closed	=SV==L01+P01/5.7	=SV==L01-X15	25	BU	=SV==L01-B57	3	=SV==L01+P01/5.7	Retractable channel closed
				WH				
Retractable channel closed	=SV==L01+P01/5.7	=SV==L01-X15	47	BK	=SV==L01-B57	4	=SV==L01+P01/5.7	Retractable channel closed

change	date	name					
			date	26.08.13	Titan Umreifungstechnik	=SV==L01+L10-W57	= SV==AUSW	+L10
			editor	Lo Grasso	Berliner Straße 51-55			
			check.	26.11.13	58332 Schwelm	VS11-S	T13079	Sh. 15
			standa	VDE 0100	origin / replace for / replace through	Möllers		29 Sh.

BI_A3N1D

interconnection diagram

cable name =SV==L01+L10-W61		cable type PUR	
remark		no. of cores 3	cross-section 0.34	cable length –

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
Locking pin strapping aggregate in	=SV==L01+P01/6.1	=SV==L01-X15	9	BN	=SV==L01-B61	1	=SV==L01+P01/6.1	Locking pin strapping aggregate in
Locking pin strapping aggregate in	=SV==L01+P01/6.1	=SV==L01-X15	27	BU	=SV==L01-B61	3	=SV==L01+P01/6.1	Locking pin strapping aggregate in
Locking pin strapping aggregate in	=SV==L01+P01/6.1	=SV==L01-X15	49	BK	=SV==L01-B61	4	=SV==L01+P01/6.1	Locking pin strapping aggregate in

15

17

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==L01+L10-W61		= SV==AUSW	+ L10	
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S		T13079		Sh. 16
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			29 Sh.

BI_A3N1D

interconnection diagram

cable name =SV==L01+L10-W64		cable type ÖLFLEX	
remark		no. of cores 4/PE	cross-section 0.5 / cable length –

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
Main stop valve pressure switch	=SV==L01+P01/6.4	=SV==L01-X15	12	1	=SV==L01-S64	1	=SV==L01+P01/6.4	reserve
Main stop valve pressure switch	=SV==L01+P01/6.4	=SV==L01-X15	30	2	=SV==L01-S64	4	=SV==L01+P01/6.4	reserve
Main stop valve pressure switch	=SV==L01+P01/6.4	=SV==L01-X15	52	3	=SV==L01-S64	3	=SV==L01+P01/6.4	reserve
Main stop valve pressure switch	=SV==L01+P01/6.4	=SV==L01-X15	PE	PE	=SV==L01-S64	PE	=SV==L01+P01/6.4	reserve

16

18

change	date	name					
			date	26.08.13	Titan Umreifungstechnik Berliner Straße 51-55 58332 Schwelm	TITAN	=SV==L01+L10-W64 VS11-S
			editor	Lo Grasso			
			check.	26.11.13			
			standa	VDE 0100	origin / replace for / replace through		Möllers

= SV==AUSW	+ L10	
T13079		Sh. 17 29 Sh.

BI_A3N1D

interconnection diagram

cable name =SV==L01+L10-W65		cable type ÖLFLEX	
remark		no. of cores 4/PE	cross-section 0.5	cable length –

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
VS11 unit pressure switch pressure air	=SV==L01+P01/6.5	=SV==L01-X15	13	1	=SV==L01-S65	1	=SV==L01+P01/6.5	Main stop valve pressure switch
VS11 unit pressure switch pressure air	=SV==L01+P01/6.5	=SV==L01-X15	31	2	=SV==L01-S65	4	=SV==L01+P01/6.5	Main stop valve pressure switch
VS11 unit pressure switch pressure air	=SV==L01+P01/6.5	=SV==L01-X15	53	3	=SV==L01-S65	2	=SV==L01+P01/6.5	Main stop valve pressure switch
VS11 unit pressure switch pressure air	=SV==L01+P01/6.5	=SV==L01-X15	PE	PE	=SV==L01-S65	PE	=SV==L01+P01/6.5	Main stop valve pressure switch

17

19

change	date	name	standa	VDE 0100	origin	replace for	replace through
			date	26.08.13			
			editor	Lo Grasso			
			check.	26.11.13			

Titan Umreifungstechnik
Berliner Straße 51-55
58332 Schwelm

TITAN

=SV==L01+L10-W65
VS11-S
Möllers

= SV==AUSW | +L10

T13079

Sh. 18
29 Sh.

BI_A3N1D

interconnection diagram

cable name	=SV==L01+L10-W71	cable type	ÖLFLEX-FD 855P		
remark		no. of cores	36/PE	cross-section	1	cable length	–

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
VS11L strap stop switch B1	=SV==L01+P01/7.1	=SV==L01-X15	37	1	=SV==L01+L18-XS1	A1	=SV==L01+P01/7.1	VS11L strap stop switch B1
VS11L strap stop switch B1	=SV==L01+P01/7.1	=SV==L01-X15	38	2	=SV==L01+L18-XS1	A2	=SV==L01+P01/7.1	VS11L strap stop switch B1
VS11L air valve middle Y1	=SV==M01+P01/1.1	=SV==M01-X16	9	3	=SV==L01+L18-XS1	A3	=SV==M01+P01/1.1	VS11L air valve middle Y1
VS11L strap stop switch B1	=SV==L01+P01/7.1	=SV==L01-X15	57	4	=SV==L01+L18-XS1	B1	=SV==L01+P01/7.1	VS11L strap stop switch B1
VS11L counter switch B2	=SV==L01+P01/7.2	=SV==L01-X15	58	5	=SV==L01+L18-XS1	B2	=SV==L01+P01/7.2	VS11L counter switch B2
VS11L 0-position B3	=SV==L01+P01/7.3	=SV==L01-X15	59	6	=SV==L01+L18-XS1	B3	=SV==L01+P01/7.3	VS11L 0-position B3
VS11L clamp position B4	=SV==L01+P01/7.4	=SV==L01-X15	60	7	=SV==L01+L18-XS1	B4	=SV==L01+P01/7.4	VS11L clamp position B4
VS11-L safety switch flap open	=SV==L01+P01/7.5	=SV==L01-X15	61	8	=SV==L01+L18-XS1	C1	=SV==L01+P01/7.5	VS11-L safety switch flap open
				9				
				10				
VS11-L service - switch insert strap	=SV==L01+P01/7.8	=SV==L01-X15	64	11	=SV==L01+L18-XS1	C4	=SV==L01+P01/7.8	VS11-L service - switch insert strap
VS11L service - switch sealing B10	=SV==L01+P01/8.1	=SV==L01-X15	65	12	=SV==L01+L18-XS1	D1	=SV==L01+P01/8.1	VS11L service - switch sealing B10
VS11L reserve	=SV==L01+P01/8.2	=SV==L01-X15	66	13	=SV==L01+L18-XS1	D2	=SV==L01+P01/8.2	VS11L reserve
VS11L reserve	=SV==L01+P01/8.3	=SV==L01-X15	67	14	=SV==L01+L18-XS1	D3	=SV==L01+P01/8.3	VS11L reserve
				15				
				16				
VS11L air valve middle Y1	=SV==M01+P01/1.1	=SV==M01-X16	11	17	=SV==L01+L18-XS1	E1	=SV==M01+P01/1.1	VS11L air valve middle Y1
VS11L air valve quick Y2	=SV==M01+P01/1.2	=SV==M01-X16	12	18	=SV==L01+L18-XS1	E2	=SV==M01+P01/1.2	VS11L air valve quick Y2
VS11L transport motor forward Y3	=SV==M01+P01/1.3	=SV==M01-X16	13	19	=SV==L01+L18-XS1	E3	=SV==M01+P01/1.3	VS11L transport motor forward Y3
VS11L transport motor backward Y4	=SV==M01+P01/1.4	=SV==M01-X16	14	20	=SV==L01+L18-XS1	E4	=SV==M01+P01/1.4	VS11L transport motor backward Y4
VS11L sealing motor Y5	=SV==M01+P01/1.5	=SV==M01-X16	15	21	=SV==L01+L18-XS1	F1	=SV==M01+P01/1.5	VS11L sealing motor Y5
VS11L tensioning motor Y6	=SV==M01+P01/1.6	=SV==M01-X16	16	22	=SV==L01+L18-XS1	F2	=SV==M01+P01/1.6	VS11L tensioning motor Y6
VS11L transport slide Y7	=SV==M01+P01/1.7	=SV==M01-X16	17	23	=SV==L01+L18-XS1	F3	=SV==M01+P01/1.7	VS11L transport slide Y7
VS11L straightening device Y8	=SV==M01+P01/1.8	=SV==M01-X16	18	24	=SV==L01+L18-XS1	F4	=SV==M01+P01/1.8	VS11L straightening device Y8
VS11L strap stop cylinder Y9	=SV==M01+P01/2.1	=SV==M01-X16	19	25	=SV==L01+L18-XS1	G1	=SV==M01+P01/2.1	VS11L strap stop cylinder Y9
VS11L tensioning slide pressed Y16	=SV==M01+P01/2.2	=SV==M01-X16	20	26	=SV==L01+L18-XS1	G2	=SV==M01+P01/2.2	VS11L tensioning slide pressed Y16
VS11L open flap Y17	=SV==M01+P01/2.3	=SV==M01-X16	21	27	=SV==L01+L18-XS1	G3	=SV==M01+P01/2.3	VS11L open flap Y17
VS11L close flap Y18	=SV==M01+P01/2.4	=SV==M01-X16	22	28	=SV==L01+L18-XS1	G4	=SV==M01+P01/2.4	VS11L close flap Y18
				29				
VS11L reserve	=SV==M01+P01/2.6	=SV==M01-X16	23	30	=SV==L01+L18-XS1	A4	=SV==M01+P01/2.6	VS11L reserve
VS11L counter switch B2	=SV==L01+P01/7.2	=SV==L01-X15	39	31	=SV==L01+L18-XS1	C2	=SV==L01+P01/7.2	VS11L counter switch B2
VS11L counter switch B2	=SV==L01+P01/7.2	=SV==L01-X15	40	32	=SV==L01+L18-XS1	C3	=SV==L01+P01/7.2	VS11L counter switch B2
				33				
				34				
				35				
VS11L reserve	=SV==M01+P01/2.8	=SV==M01-X16	PE	PE	=SV==L01+L18-XS1	D4	=SV==M01+P01/2.8	VS11L reserve

18

20

change	date	name	standa	VDE 0100	origin	replace for	replace through
			date	26.08.13			
			editor	Lo Grasso			
			check.	26.11.13			

Titan Umreifungstechnik
Berliner Straße 51-55
58332 Schwelm

TITAN

=SV==L01+L10-W71

VS11-S

Möllers

= SV==AUSW

+ L10

T13079

Sh. 19
29 Sh.

BI_A3N1D

interconnection diagram

cable name =SV==L01+L10-W76		cable type PUR	
remark		no. of cores 4	cross-section 0.34	cable length –

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
reserve	=SV==L01+P01/6.7	=SV==L01-X15	15	BN	=SV==L01-B76	1	=SV==L01+P01/7.6	VS11L head before package B7
reserve	=SV==L01+P01/6.7	=SV==L01-X15	33	BU	=SV==L01-B76	3	=SV==L01+P01/7.6	VS11L head before package B7
				WH				
VS11L head before package B7	=SV==L01+P01/7.6	=SV==L01-X15	62	BK	=SV==L01-B76	4	=SV==L01+P01/7.6	VS11L head before package B7

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==L01+L10-W76	= SV==AUSW	+L10		
			editor	Lo Grasso	Berliner Straße 51-55			T13079		Sh. 20	
			check.	26.11.13	58332 Schwelm		VS11-S			29 Sh.	
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			

B1_A3N1D

interconnection diagram

cable name =SV==L01+L10-W77		cable type PUR	
remark		no. of cores 4	cross-section 0.34	cable length –

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
				BN				
				BU				
				WH				
VS11L head on package B8	=SV==L01+P01/7.7	=SV==L01-X15	63	BK	=SV==L01-B77	4	=SV==L01+P01/7.7	VS11L head on package B8

20

22

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==L01+L10-W77	= SV==AUSW	+L10
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 21
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		29 Sh.

BI_A3N10

interconnection diagram

cable name =SV==M01+L10-W41		cable type ÖLFLEX	
remark		no. of cores 3/PE	cross-section 0.75	cable length –

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
compressed air main valve	=SV==M01+P01/4.1	=SV==M01-X16	24	1	=SV==M01-Y41	A1	=SV==M01+P01/4.1	compressed air main valve
compressed air main valve	=SV==M01+P01/4.1	=SV==M01-X16	1	2	=SV==M01-Y41	A2	=SV==M01+P01/4.1	compressed air main valve
				PE				

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==M01+L10-W41	=SV==AUSW	+L10
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 22
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		29 Sh.

BI_A3N1D

interconnection diagram

cable name =SV==M01+L10-W42		cable type ÖLFLEX	
remark		no. of cores 3/PE	cross-section 0.75	cable length –

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
strapping head ago	=SV==M01+P01/4.2	=SV==M01-X16	25	1	=SV==M01-Y42	A1	=SV==M01+P01/4.2	strapping head ago
strapping head ago	=SV==M01+P01/4.2	=SV==M01-X16	2	2	=SV==M01-Y42	A2	=SV==M01+P01/4.2	strapping head ago
				PE				

22

24

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==M01+L10-W42	= SV==AUSW	+L10
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 23
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		29 Sh.

BI_A3N1D

interconnection diagram

cable name	=SV==M01+L10-W43	cable type	ÖLFLEX		
remark		no. of cores	3/PE	cross-section	0.75	cable length	–

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
Strapping unit back	=SV==M01+P01/4.3	=SV==M01-X16	26	1	=SV==M01-Y43	A1	=SV==M01+P01/4.3	Strapping unit back
Strapping unit back	=SV==M01+P01/4.3	=SV==M01-X16	3	2	=SV==M01-Y43	A2	=SV==M01+P01/4.3	Strapping unit back
				PE				

23

25

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==M01+L10-W43	= SV==AUSW	+L10
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 24
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		29 Sh.

BI_A3N1D

interconnection diagram

cable name =SV==M01+L10-W44		cable type ÖLFLEX	
remark		no. of cores 3/PE	cross-section 0.75	cable length –

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
Retractable channel before	=SV==M01+P01/4.4	=SV==M01-X16	27	1	=SV==M01-Y44	A1	=SV==M01+P01/4.4	Retractable channel before
Retractable channel before	=SV==M01+P01/4.4	=SV==M01-X16	4	2	=SV==M01-Y44	A2	=SV==M01+P01/4.4	Retractable channel before
				PE				

24

26

change	date	name					
			date	26.08.13	Titan Umreifungstechnik Berliner Straße 51-55 58332 Schwelm	TITANO	=SV==M01+L10-W44 VS11-S
			editor	Lo Grasso			
			check.	26.11.13			
			standa	VDE 0100	origin	replace for	replace through

Möllers

= SV==AUSW | +L10

T13079

Sh. 25
29 Sh.

BI_A3N1D

interconnection diagram

cable name	=SV==M01+L10-W45	cable type	ÖLFLEX		
remark		no. of cores	3/PE	cross-section	0.75

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
Retractable channel back	=SV==M01+P01/4.5	=SV==M01-X16	28	1	=SV==M01-Y45	A1	=SV==M01+P01/4.5	Retractable channel back
Retractable channel back	=SV==M01+P01/4.5	=SV==M01-X16	5	2	=SV==M01-Y45	A2	=SV==M01+P01/4.5	Retractable channel back
				PE				

25

27

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==M01+L10-W45	= SV==AUSW	+ L10		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 26	
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			29 Sh.

BI_A3N1D

interconnection diagram

cable name =SV==M01+L10-W47		cable type ÖLFLEX	
remark		no. of cores 3/PE	cross-section 0.75 / cable length –

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
VS11 strapping head	=SV==M01+P01/4.7	=SV==M01-X16	30	1	=SV==M01-Y47	A1	=SV==M01+P01/4.7	VS11 strapping head
VS11 strapping head	=SV==M01+P01/4.7	=SV==M01-X16	7	2	=SV==M01-Y47	A2	=SV==M01+P01/4.7	VS11 strapping head
				PE				

26

28

change	date	name	standa					
			date	26.08.13	Titan Umreifungstechnik		=SV==M01+L10-W47	= SV==AUSW	+L10
			editor	Lo Grasso	Berliner Straße 51-55	TITAN			
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 27
			VDE 0100	origin	replace for	replace through	Möllers		29 Sh.

BI_A3N10

interconnection diagram

cable name	=SV==M01+L10-W48	cable type	ÖLFLEX		
remark		no. of cores	3/PE	cross-section	0.75

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
strap clamp open/close	=SV==M01+P01/4.8	=SV==M01-X16	31	1	=SV==M01-Y48	A1	=SV==M01+P01/4.8	strap clamp open/close
strap clamp open/close	=SV==M01+P01/4.8	=SV==M01-X16	8	2	=SV==M01-Y48	A2	=SV==M01+P01/4.8	strap clamp open/close
				PE				

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==M01+L10-W48	= SV==AUSW	+ L10		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 28	
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			29 Sh.

parts list

B1_A3020_PRO

pos.	designation	amount	designation		order number	function text
9	=SV==DOKU+L10	0	compactly control cabinet	380x600x210	08849904122	
10	=SV==L01+L10-B53	1	pneumatical component part	look at mechanic part list		Strapping unit to the package
11	=SV==L01+L10-B57	1	pneumatical component part	look at mechanic part list		Retractable channel closed
12	=SV==L01+L10-B61	1	proximity switch	M12x1, 4b	08211000530	Locking pin strapping head in strapping position
13	=SV==L01+L10-B61	1	plug	wit LED 4 pole / M12x1 / 5m	08336001043	Locking pin strapping head in strapping position
14	=SV==L01+L10-B76	1	strapping head parts	see strapping head spare part list		VS11L head before package B7
15	=SV==L01+L10-B77	1	strapping head parts	see strapping head spare part list		VS11L head on package B8
16	=SV==L01+L10-S51	1	basic switch	snap-action contacts 2NO+2NC	08310000149	strapping head home position
17	=SV==L01+L10-S51	1	supply for limit switch.		08310000148	strapping head home position
18	=SV==L01+L10-S51	1	swivel arm for limit switch.	lever 27mm with steel reel	08332300771	strapping head home position
19	=SV==L01+L10-S55	1	basic switch	snap-action contacts 2NO+2NC	08310000149	Retractable Rear Channel home position
20	=SV==L01+L10-S55	1	supply for limit switch.		08310000148	Retractable Rear Channel home position
21	=SV==L01+L10-S55	1	swivel arm for limit switch.	lever 27mm with steel reel	08332300771	Retractable Rear Channel home position
22	=SV==L01+L10-S64	1	pneumatical component part	look at mechanic part list		
23	=SV==L01+L10-S65	1	pneumatical component part	look at mechanic part list		
24	=SV==M01+L10-Y41	1	pneumatical component part	look at mechanic part list		compressed air main valve
25	=SV==M01+L10-Y42	1	pneumatical component part	look at mechanic part list		strapping head ago
26	=SV==M01+L10-Y43	1	pneumatical component part	look at mechanic part list		Strapping unit back
27	=SV==M01+L10-Y44	1	pneumatical component part	look at mechanic part list		Retractable channel before
28	=SV==M01+L10-Y45	1	pneumatical component part	look at mechanic part list		Retractable channel back
29	=SV==M01+L10-Y47	1	pneumatical component part	look at mechanic part list		VS11 strapping head
30	=SV==M01+L10-Y48	1	pneumatical component part	look at mechanic part list		strap clamp open/close

28

+L18/1

			date	26.08.13	Titan Umreifungstechnik	TITAN	parts list	= SV==AUSW	+L10		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 29	
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers			29 Sh.

BI_A3R1D

terminal strip and connector overview

terminal strip and connector designation	text of the strip definition	terminals / connectors					graphic page of the terminal strip
		first	last	amount PE	amount N	totally amount	
=SV==L01+L18-XK1		1	83	0	0	68	=SV==AUSW+L18/2
=SV==L01+L18-XS1		A1	G4	0	0	28	=SV==AUSW+L18/5

+L10/29

			date	26.08.13	Titan Umreifungstechnik	TITAN	terminal strip and connector overview	= SV==AUSW	+L18		
			editor	Lo Grasso	Berliner Straße 51-55						
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 1	
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers			6 Sh.	

terminal diagram

BI_A3K2D

terminal strip designation

=SV==L01+L18-XK1

function text	cable name	typ	target destination	connection	terminal number	jumper	connection name	target destination	connection	typ	cable name	page/path
VS11L strap stop switch B1			-B71	4	1	o	E8.0	-XS1	B1			=SV==L01+P01/7.1
VS11L counter switch B2			-B72	4	2	o		-XS1	B2			=SV==L01+P01/7.2
VS11L O-position B3			-B73	4	3	o	E8.2	-XS1	B3			=SV==L01+P01/7.3
VS11L clamp position B4			-B74	4	4	o	E8.3	-XS1	B4			=SV==L01+P01/7.4
VS11L safety switch flap			-B75	4	5	o	E8.4	-XS1	C1			=SV==L01+P01/7.5
VS11L service - switch strap					6	o						=SV==L01+P01/7.8
-					7	o						=SV==L01+P01/7.8
-			-B78	14	8	o	E8.7	-XS1	C4			=SV==L01+P01/7.8
VS11L service - switch sealing			-S81	14	9	o	E9.0	-XS1	D1			=SV==L01+P01/8.1
VS11L reserve					10	o	E9.1	-XS1	D2			=SV==L01+P01/8.2
-					11	o	E9.2	-XS1	D3			=SV==L01+P01/8.3
-					12	o						=SV==L01+P01/8.4
-					13	o						=SV==L01+P01/8.5
VS11L strap stop switch B1			-B71	1	14			-XS1	A1			=SV==L01+P01/7.1
VS11L counter switch B2			-B72	1	15							=SV==L01+P01/7.2
VS11L O-position B3			-B73	1	16							=SV==L01+P01/7.3
VS11L clamp position B4			-B74	1	17							=SV==L01+P01/7.4
VS11L safety switch flap			-B75	1	18							=SV==L01+P01/7.5
VS11L service - switch strap			-B78	13	21							=SV==L01+P01/7.8
VS11L service - switch sealing			-S81	13	22							=SV==L01+P01/8.1
-					23							=SV==L01+P01/8.2
VS11L reserve					24							=SV==L01+P01/8.3
-					25							=SV==L01+P01/8.4
-					26							=SV==L01+P01/8.5
VS11L strap stop switch B1			-B71	3	27			-XS1	A2			=SV==L01+P01/7.1
VS11L counter switch B2			-B72	3	28							=SV==L01+P01/7.2
VS11L O-position B3			-B73	3	29							=SV==L01+P01/7.3
VS11L clamp position B4			-B74	3	30							=SV==L01+P01/7.4
VS11L safety switch flap			-B75	3	31							=SV==L01+P01/7.5
VS11L service - switch strap					34							=SV==L01+P01/7.8
VS11L service - switch sealing					35							=SV==L01+P01/8.1
VS11L reserve					36							=SV==L01+P01/8.2

1

3

change	date	name					
			date	26.08.13	Titan Umreifungstechnik	=SV==L01+L18-XK1	= SV==AUSW / +L18
			editor	Lo Grasso	Berliner Straße 51-55	VS11-S	T13079
			check.	26.11.13	58332 Schwelm		Sh. 2 / 6 Sh.
			standa	VDE 0100	origin / replace for / replace through	Möllers	

BI_A3K2D

terminal diagram

terminal strip designation

=SV==L01+L18-XK1

function text	cable name	typ	target destination	connection	terminal number	jumper	connection name	target destination	connection	typ	cable name	page/path
VS11L reserve					37							=SV==L01+P01/8.3
-					38							=SV==L01+P01/8.4
-					39							=SV==L01+P01/8.5
VS11L air valve middle Y1			-Y11	A1	51	o	A10.0	-XS1	E1			=SV==M01+P01/1.1
VS11L air valve quick Y2			-Y12	A1	52	o	A10.1	-XS1	E2			=SV==M01+P01/1.2
VS11L transport motor forward Y3			-Y13	A1	53	o	A10.2	-XS1	E3			=SV==M01+P01/1.3
VS11L transport motor backward Y4			-Y14	A1	54	o	A10.3	-XS1	E4			=SV==M01+P01/1.4
VS11L sealing motor Y5			-Y15	A1	55	o	A10.4	-XS1	F1			=SV==M01+P01/1.5
VS11L tensioning motor Y6			-Y16	A1	56	o	A10.5	-XS1	F2			=SV==M01+P01/1.6
VS11L transport slide Y7			-Y17	A1	57	o	A10.6	-XS1	F3			=SV==M01+P01/1.7
VS11L straightening device Y8			-Y18	A1	58	o	A10.7	-XS1	F4			=SV==M01+P01/1.8
VS11L strap stop cylinder Y9			-Y21	A1	59	o	A11.0	-XS1	G1			=SV==M01+P01/2.1
VS11L tensioning slide pressed Y16			-Y22	A1	60	o	A11.1	-XS1	G2			=SV==M01+P01/2.2
VS11L open flap Y17			-Y23	A1	61	o	A11.2	-XS1	G3			=SV==M01+P01/2.3
VS11L close flap Y18			-Y24	A1	62	o	A11.3	-XS1	G4			=SV==M01+P01/2.4
VS11L air valve middle Y1			-Y11	A2	63			-XS1	A3			=SV==M01+P01/1.1
VS11L air valve quick Y2			-Y12	A2	64							=SV==M01+P01/1.2
VS11L transport motor forward Y3			-Y13	A2	65							=SV==M01+P01/1.3
VS11L transport motor backward Y4			-Y14	A2	66							=SV==M01+P01/1.4
VS11L sealing motor Y5			-Y15	A2	67							=SV==M01+P01/1.5
VS11L tensioning motor Y6			-Y16	A2	68							=SV==M01+P01/1.6
VS11L transport slide Y7			-Y17	A2	69							=SV==M01+P01/1.7
VS11L straightening device Y8			-Y18	A2	70							=SV==M01+P01/1.8
VS11L strap stop cylinder Y9			-Y21	A2	71							=SV==M01+P01/2.1
VS11L tensioning slide pressed Y16			-Y22	A2	72							=SV==M01+P01/2.2
VS11L open flap Y17			-Y23	A2	73							=SV==M01+P01/2.3
VS11L close flap Y18			-Y24	A2	74							=SV==M01+P01/2.4
-					75							=SV==M01+P01/2.5
VS11L reserve					76							=SV==M01+P01/2.6
-					77	o						=SV==M01+P01/2.5
-					78	o		-XS1	A4			=SV==M01+P01/2.6
-					79	o						=SV==M01+P01/2.7

2 4

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==L01+L18-XK1	= SV==AUSW	+L18	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 3
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		6 Sh.

terminal diagram

BI_A3K2D

terminal strip designation

=SV==L01+L18-XK1

function text	cable name	typ	target destination	connection	terminal number	jumper	connection name	target destination	connection	typ	cable name	page/path
VS11L reserve					80							=SV==M01+P01/2.8
.					81			-XS1	D4			=SV==M01+P01/2.8
.					82							=SV==M01+P01/2.8
.					83							=SV==M01+P01/2.9

3

5

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==L01+L18-XK1	= SV==AUSW	+ L18	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 4
change	date	name	standa	VDE 0100	origin / replace for / replace through		Möllers			6 Sh.

BI_A3K2D

terminal diagram

terminal strip designation

=SV==L01+L18-XS1

function text	cable name	typ	target destination	connection	terminal number	jumper	connection name	target destination	connection	typ	cable name	=SV==L01+L10-W71 ÖLFLEX-FD 855P	page/path
VS11L strap stop switch B1			-XK1	14	A1	o		+L10-X15	37			1	=SV==L01+P01/7.1
-			-XK1	27	A2	o		+L10-X15	38			2	=SV==L01+P01/7.1
VS11L air valve middle Y1			-XK1	63	A3	o		=SV==M01+L10-X16	9			3	=SV==M01+P01/1.1
VS11L reserve			-XK1	78	A4	o		=SV==M01+L10-X16	23			30	=SV==M01+P01/2.6
VS11L strap stop switch B1			-XK1	1	B1	o	E8.0	+L10-X15	57			4	=SV==L01+P01/7.1
VS11L counter switch B2			-XK1	2	B2	o		+L10-X15	58			5	=SV==L01+P01/7.2
VS11L O-position B3			-XK1	3	B3	o	E8.2	+L10-X15	59			6	=SV==L01+P01/7.3
VS11L clamp position B4			-XK1	4	B4	o	E8.3	+L10-X15	60			7	=SV==L01+P01/7.4
VS11L safety switch flap			-XK1	5	C1	o	E8.4	+L10-X15	61			8	=SV==L01+P01/7.5
VS11L counter switch B2					C2	o		+L10-X15	39			31	=SV==L01+P01/7.2
-					C3	o		+L10-X15	40			32	=SV==L01+P01/7.2
VS11L service - switch strap			-XK1	8	C4	o	E8.7	+L10-X15	64			11	=SV==L01+P01/7.8
VS11L service - switch sealing			-XK1	9	D1	o	E9.0	+L10-X15	65			12	=SV==L01+P01/8.1
VS11L reserve			-XK1	10	D2	o	E9.1	+L10-X15	66			13	=SV==L01+P01/8.2
-			-XK1	11	D3	o	E9.2	+L10-X15	67			14	=SV==L01+P01/8.3
-			-XK1	81	D4	o		=SV==M01+L10-X16	PE			PE	=SV==M01+P01/2.8
VS11L air valve middle Y1			-XK1	51	E1	o	A10.0	=SV==M01+L10-X16	11			17	=SV==M01+P01/1.1
VS11L air valve quick Y2			-XK1	52	E2	o	A10.1	=SV==M01+L10-X16	12			18	=SV==M01+P01/1.2
VS11L transport motor forward Y3			-XK1	53	E3	o	A10.2	=SV==M01+L10-X16	13			19	=SV==M01+P01/1.3
VS11L transport motor backward Y4			-XK1	54	E4	o	A10.3	=SV==M01+L10-X16	14			20	=SV==M01+P01/1.4
VS11L sealing motor Y5			-XK1	55	F1	o	A10.4	=SV==M01+L10-X16	15			21	=SV==M01+P01/1.5
VS11L tensioning motor Y6			-XK1	56	F2	o	A10.5	=SV==M01+L10-X16	16			22	=SV==M01+P01/1.6
VS11L transport slide Y7			-XK1	57	F3	o	A10.6	=SV==M01+L10-X16	17			23	=SV==M01+P01/1.7
VS11L straightening device Y8			-XK1	58	F4	o	A10.7	=SV==M01+L10-X16	18			24	=SV==M01+P01/1.8
VS11L strap stop cylinder Y9			-XK1	59	G1	o	A11.0	=SV==M01+L10-X16	19			25	=SV==M01+P01/2.1
VS11L tensioning slide pressed Y16			-XK1	60	G2	o	A11.1	=SV==M01+L10-X16	20			26	=SV==M01+P01/2.2
VS11L open flap Y17			-XK1	61	G3	o	A11.2	=SV==M01+L10-X16	21			27	=SV==M01+P01/2.3
VS11L close flap Y18			-XK1	62	G4	o	A11.3	=SV==M01+L10-X16	22			28	=SV==M01+P01/2.4

change	date	name						
			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==L01+L18-XS1	= SV==AUSW	+ L18
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 5
			standa	VDE 0100	origin	replace for	replace through	Möllers		6 Sh.

BI_A302D_PRO

parts list

pos.	designation	amount	designation		order number	function text
31	=SV==DOKU+L18	0	terminal housing	150x150x80 mm	08849904123	
32	=SV==L01+L18-B71	1	strapping head parts	see strapping head spare part list		VS11L strap stop switch B1
33	=SV==L01+L18-B72	1	strapping head parts	see strapping head spare part list		VS11L counter switch B2
34	=SV==L01+L18-B73	1	strapping head parts	see strapping head spare part list		VS11L 0-position B3
35	=SV==L01+L18-B74	1	strapping head parts	see strapping head spare part list		VS11L clamp position B4
36	=SV==L01+L18-B75	1	strapping head parts	see strapping head spare part list		VS11L safety switch flap open B6
37	=SV==L01+L18-B78	1	strapping head parts	see strapping head spare part list		VS11L service - switch strap insertion B9
38	=SV==L01+L18-S81	1	strapping head parts	see strapping head spare part list		VS11L service - switch sealing B10
39	=SV==L01+L18-Y11	1	strapping head parts	see strapping head spare part list		VS11L air valve middle Y1
40	=SV==L01+L18-Y12	1	strapping head parts	see strapping head spare part list		VS11L air valve quick Y2
41	=SV==L01+L18-Y13	1	strapping head parts	see strapping head spare part list		VS11L transport motor forward Y3
42	=SV==L01+L18-Y14	1	strapping head parts	see strapping head spare part list		VS11L transport motor backward Y4
43	=SV==L01+L18-Y15	1	strapping head parts	see strapping head spare part list		VS11L sealing motor Y5
44	=SV==L01+L18-Y16	1	strapping head parts	see strapping head spare part list		VS11L tensioning motor Y6
45	=SV==L01+L18-Y17	1	strapping head parts	see strapping head spare part list		VS11L transport slide Y7
46	=SV==L01+L18-Y18	1	strapping head parts	see strapping head spare part list		VS11L straightening device Y8
47	=SV==L01+L18-Y21	1	strapping head parts	see strapping head spare part list		VS11L strap stop cylinder Y9
48	=SV==L01+L18-Y22	1	strapping head parts	see strapping head spare part list		VS11L tensioning slide pressed Y16
49	=SV==L01+L18-Y23	1	strapping head parts	see strapping head spare part list		VS11L open flap Y17
50	=SV==L01+L18-Y24	1	strapping head parts	see strapping head spare part list		VS11L close flap Y18

5

+S15/1

			date	26.08.13	Titan Umreifungstechnik	TITAN	parts list	= SV==AUSW	+ L18
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 6
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers		6 Sh.

BI_A302D_PRO

parts list

pos.	designation	amount	designation	order number	function text
170	=SV==DOKU+S15	1	metal housing for 3 control device	08332302050	

+L18/6

+LK25/1

			date	26.08.13	Titan Umreifungstechnik	TITAN	parts list	= SV==AUSW	+ S15	
			editor	Lo Grasso	Berliner Straße 51-55					
			check.	26.11.13	58332 Schwelm		VS11-S	T13079		Sh. 1
change	date	name	standa	VDE 0100	origin	replace for	replace through	Möllers		1 Sh.

BI_A3S2D

cable overview

cable name cable designation	source by	target to	cable type	total cores	used cores	cross-section mm²	m	remark	graphics - page
=SV==X03+LK25-W11	=SV==L01+P01-X15	=SV==X03-X25	ÖLFLEX	4/PE	2	1.5	-		/2

+S15/1

change	date	name							
			date	26.08.13	Titan Umreifungstechnik		cable overview	= SV==AUSW	+ LK25
			editor	Lo Grasso	Berliner Straße 51-55	TITAN			
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 1
			standa	VDE 0100	origin / replace for / replace through		Möllers		2 Sh.

BI_A3N1D

interconnection diagram

cable name =SV==X03+LK25-W11		cable type ÖLFLEX	
remark		no. of cores 4/PE	cross-section 1.5	cable length –

function text	page/path	destinaton from	pin	core	destinaton to	pin	page/path	function text
machine in home position	=SV==X03+P01/3.1	=SV==L01+P01-X15	62	1	=SV==X03-X25	1		
machine in home position	=SV==X03+P01/3.4	=SV==L01+P01-X15	63	2	=SV==X03-X25	2		
				3				
				PE				

1

			date	26.08.13	Titan Umreifungstechnik	TITAN	=SV==X03+LK25-W11	= SV==AUSW	+ LK25
			editor	Lo Grasso	Berliner Straße 51-55				
			check.	26.11.13	58332 Schwelm		VS11-S	T13079	Sh. 2
change	date	name	standa	VDE 0100	origin	replace for / replace through	Möllers		2 Sh.